VISION IAS

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CURRENT AFFAIRS JUNE 2020

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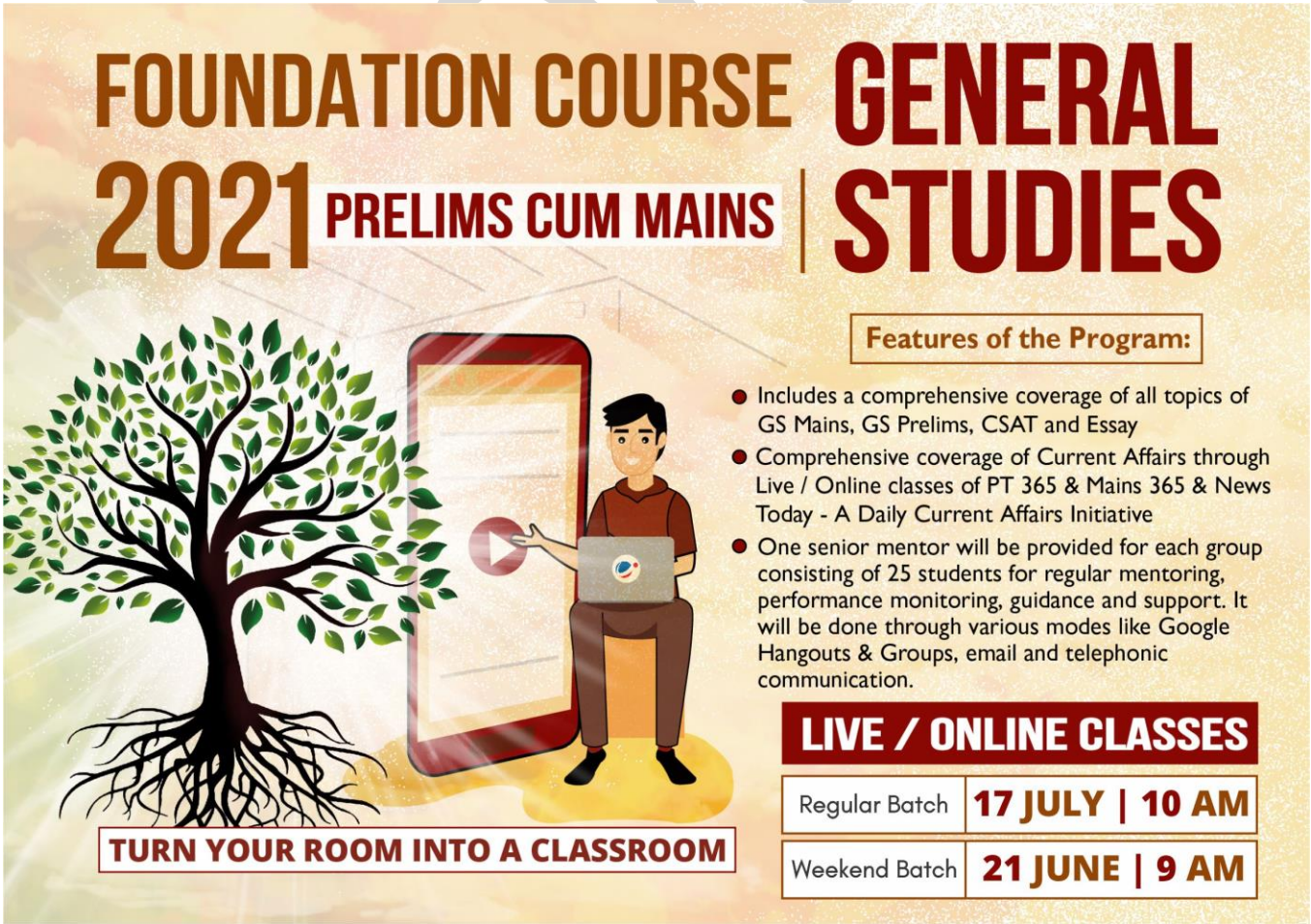
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1. POLITY AND GOVERNANCE

1.1. CUSTODIAL VIOLENCE

Why in News?

The recent death of a father-son duo from Tamil Nadu, allegedly due to custodial violence, has sparked anger across India.

About Custodial Violence

- Custodial violence is the **violence which takes place in the judicial and police custody** where an individual who has done a crime is tortured mentally as well as physically. It includes torture, rape and death.
- According to **National Campaign Against Torture**, a joint initiative by multiple NGOs, about 3/4th deaths in police custody occurred primarily as a result of torture in 2019.

Legal concerns raised in such incidents

- **Poor regard of Fundamental Rights:** A report by Common Cause and CSDS-Lokniti, showed that 12% of police personnel never receive human rights training. Also, SC in **Rama Murthy v. State of Karnataka (1996)** while upholding fundamental rights of prisoners identified 'Torture and ill treatment' in prisons as an area that needs reform.
  - These **methods of investigation involving torture are against the fundamental right to life and dignity as under Article 21** of Indian constitution.
- **Misuse of power of arrest:** The National Police Commission (3rd Report) had observed that 60 per cent of all arrests were "unnecessary". Moreover, unnecessary application of various sections of IPC like Section 506 in order to get non-bailable remand for the accused is **against Fundamental Right to Freedom (Art 19**).
- **Extra-legal behaviour**: it involves ignorance of rules and use of torture by Police while making such arrests, not following procedure laid down under CrPC by magistrate while granting police custody (upto 15 days) or judicial custody (upto 60-90 days), etc.

Challenges in curbing such incidents

- **Lack of strong legislation against torture:**
  - India does not have an anti-torture legislation and is yet to criminalise custodial violence.
  - Though India had signed the U.N. Convention against Torture in 1997 but it is yet to ratify it, that entails bringing in laws and mechanisms to fulfil the commitments. This makes India one among the nine countries across the globe yet to do so.
- **Lack of modernisation and unused funds: Bureau of Police Reforms and Development (**BPR&D) data and the CAG has highlighted the underutilisation of funds allocated under the Modernisation of Police Forces (MPF) Scheme.
- **Lack of independent functioning:** Police Act of 1861 is silent on 'superintendence' and 'general control and directions.' This enables the executives to reduce the police to mere tools in the hands of political leaders to fulfil their vested interests.
- **Lack of accountability and impunity enjoyed by Police:**
  - **Law does not permit common citizens to sue a police officer** and only the government has that discretion.
    - ✓ Recommendations of 2nd ARC and the Supreme Court (Prakash Singh case 2006) for constituting **independent complaint authority** to inquire into the cases of police misconduct have not been implemented by most of the States.
  - Also, **India does not follow the "command responsibility" principle** for police chiefs i.e. the commander of forces is not held guilty for failing to curb illegal activities of those in his charge.
  - **Internal departmental inquiries** to examine wrongdoing rarely find police culpable.
- **Poor conviction rate: National Crime Records Bureau (NCRB)** data highlights that between 2001 and 2018, only 26 policemen were convicted of custodial violence despite 1,727 such deaths being recorded in India as most such deaths were attributed to reasons other than custodial torture such as suicide.
  - Tamil Nadu, West Bengal, Gujarat, Andhra Pradesh and Maharashtra recorded zero convictions despite recording more than 100 custodial deaths in the period.
- **Weak functioning of National Human Rights Commission**: It is empowered to summon witnesses, order production of evidence, and recommend that the government initiate prosecution of officials. However, in

practice its recommendations have mostly been limited to calling on the government to **provide compensation or other immediate interim relief**.

- **Lack of witness protection:** Often, investigations related to custodial killings are mired with much delays during which victim's families are often intimidated and witnesses turn hostile.
- **Popular support encourages such actions:** Public needs to realise that the police have limited powers under the law. The police have to uphold rule of law and not take it in their own hands.

Way Forward

- **Legal remedies:**
  - **Ratify UN convention against torture:** India has ratified the International Covenant on Civil and Political Rights but has only **signed** the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment, both of which prohibit torture.
  - Reform Section 197 of CrPC to make clear that prosecutors do not need to obtain government approval before pursuing charges against police in cases alleging arbitrary detention, torture, extrajudicial killings, and other criminal acts.
- **Administrative remedies and enforcement of laws:**
  - **Strict implementation of DK Basu judgment** (1997)**:** In this case, the SC issued 11 directions to increase transparency and fix responsibility while making an arrest. For ex: medical examination of accused was made mandatory, notifying nearest kin of arrested person etc.
    - ✓ Although some of these recommendations have been included in CrPC by successive amendments but these are often ignored by the Police.
  - **Effective role of magistrate:** magistrates have a duty to prevent overreach of police powers by inspecting arrest-related documents and ensuring the wellbeing of suspects by directly questioning them.
  - **Ensure that the right to counsel** is available to suspects as soon as possible in pursuance with Article 22 of the Indian Constitution.
- **Ensure Police Accountability:**
  - **External Accountability:** Ensure that Police Complaints Authorities (PCAs) are set up as provided in Prakash Singh case (2006). End the practice of transferring police alleged to have committed abuses and ensure that investigations ordered by external agencies like NHRC are not referred to Police from same Police station.
  - **Internal accountability:** Authorise an independent internal affairs or "professional responsibility" unit at the state level to conduct random and surprise checks on police lock-ups and respond to allegations of ongoing or recurrent violations of the SC guidelines in D.K. Basu case.
- **Provide training in scientific methods of investigation:** Train investigating officers on modern, non-coercive techniques for suspect and witness interviewing and questioning.
  - Body cameras, such as the ones used in the U.S. and the U.K., on beat policeman can ensure police restraint. Techniques like narcoanalysis, video recording of investigations, CCTVs inside police stations should be properly implemented.
- **Robust Witness Protection Regime to** protect families of Victims of Custodial Killings and witnesses as recommended by **Law Commission in its 198th and 273rd reports**. All complaints by families of victims and witnesses on any kind of alleged intimidation, coercion or threat etc need to be recorded.

Conclusion

Gore Committee on Police Training (1971-73), the Ribeiro Committee on Police Reforms (1998), the Padmanabhaiah Committee on Police Reforms (2000), Malimath Committee on Reforms of Criminal Justice System (2001-03), 2nd ARC (2006) have given important recommendations. Political will is needed to implement these, especially by States as Police is a state subject.

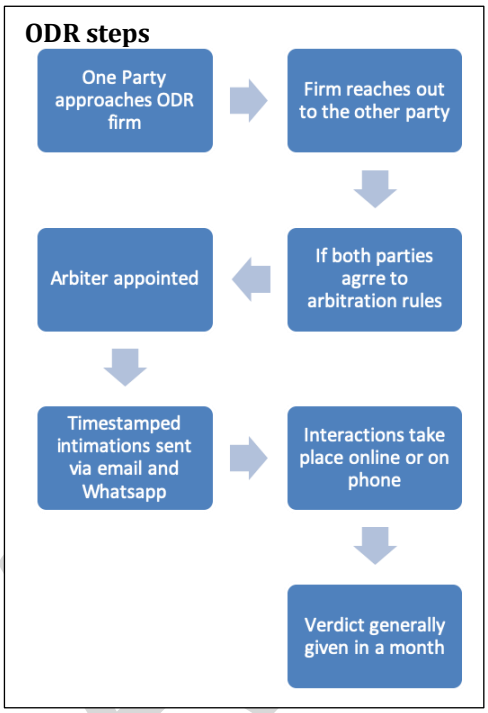
Finally, it is emphasized that death due to torture is simply a criminal act, which no authority may compromise on. There should absolutely be zero tolerance for any custodial death resulting from torture.

1.2. ONLINE DISPUTE RESOLUTION

Why in news?

Recently, there were calls for advancing Online Dispute Resolution (ODR) in India including by NITI Aayog CEO.

About Online Dispute Resolution (ODR)


ODR steps
One Party approaches ODR firm
Firm reaches out to the other party
If both parties agrre to arbitration rules
Arbiter appointed
Timestamped intimations sent via email and Whatsapp
Interactions take place online or on phone
Verdict generally given in a month

- Online Dispute Resolution (ODR) is **form of Alternative dispute redressal mechanism (ADR)** that uses negotiation, mediation and arbitration techniques to **resolve disputes with help of the Internet and ICT.**
- ODR uses **technology and employ data management tools** to ensure predictability, consistency, transparency and efficiency of the judicial process.
- **Models under ODR:**
  - **Opt-in model**, in which option of going into mediation is voluntary.
  - **Opt-out model**, under which it is mandatory to enter into mediation for at least one session, and then the parties have the liberty to opt out if they feel so.
- **ODR focuses on**
  - **Dispute resolution:** Resolving disputes that reach the courts through open, efficient, transparent process.
  - **Dispute containment and avoidance**: Facilitate and ensure through ODR that a problem does not reach the stage of a dispute thus ensures a problem does not become a dispute.
- ODR is **more suited to complaints that are** of **low value, high volume and occurring between users with access to internet.**

Benefits of ODR

- **Reduction in pendency of cases:** 4.56 million and 31.5 million cases are pending in high courts and district courts respectively according to National Judicial Data Grid (NJDG).
- **Focus on complex cases:** It has the potential to **reduce high volume of disputes outside the courts** and allow courts to focus more on complex or high public interest cases and provide accessible, affordable and expedient justice.
- **Ease of Doing Business:** Enabling ODR will help to move up the Ease of Doing Business ranking and enhance the enforceability of contracts. E.g. a case that would take six months via arbitration is being settled in 30 days through ODR.
- **Consumer satisfaction:** ODR is the best option for enhancing the redress of consumer grievances, strengthening their trust in the market.
- **Environmental benefit:** ODR has made possible to carry on **proceedings in an 'electronic room'**, this led to reduce the travel related carbon footprints.
- ODR offers a more **accessible, transparent and faster option,** particularly for companies dealing with high volume and low value transactions done online. With more Indians transacting online, the timing is right for ODR to gain acceptance as an easy mechanism to resolve grievances.

ODR across the world

- E- commerce companies in US began ODR in early 2000 and country **court mandates ODR as first step.**
- **In European Union** it is **mandatory to all online traders to provide link to EU's** ODR platform.
- In England **tax incentives are** provided for cases with mediation under ODR.

Limitations of ODR

- **Infrastructural issues,** including technical impediments like high speed internet, latest audio and video equipment's etc. hinder widespread adoption of ODR in India.
- Like ADR, **ODR is also best suited to resolve only certain types of disputes** like damages that may be payable for breach of contract.
- **Procedural issues**, as, some cases may require discovery, interrogatories, recording the testimony of a witnesses and the cross-examination, which **may not be convenient to process over the internet.**
- **Difficulty in enforcement of online awards**, as, generally, the orders in execution are subject to appeals and this delays the process of execution.
- **Other challenges:** Privacy and data security due to rise in cyber-threats; lack of digital literacy; lack of enough arbitrators, building trust among consumers etc.

Way forward

- **Lok Adalats must be encouraged to utilize ODR platforms** to conduct online Lok Adalat and NALSA and state legal services authorities can be encouraged to engage with ODR institutions.
- **Court-mandated mediation under the Commercial Courts Act and the Consumer Protection Act can be hosted on ODR platforms** for more consistent and deeper reach across the Indian society.
- Involve private players, to **develop a robust ODR platform, which is easily accessible, user-friendly, less expensive** and efficient for resolution of disputes.
- **Create awareness amongst the lawyer community and also among the consumers** about the advantages of ODR. Awareness among legal community about how this is an opportunity for them to grow too, and not see this as threat to practitioners.

1.3. 5TH ANNIVERSARY OF URBAN MISSIONS

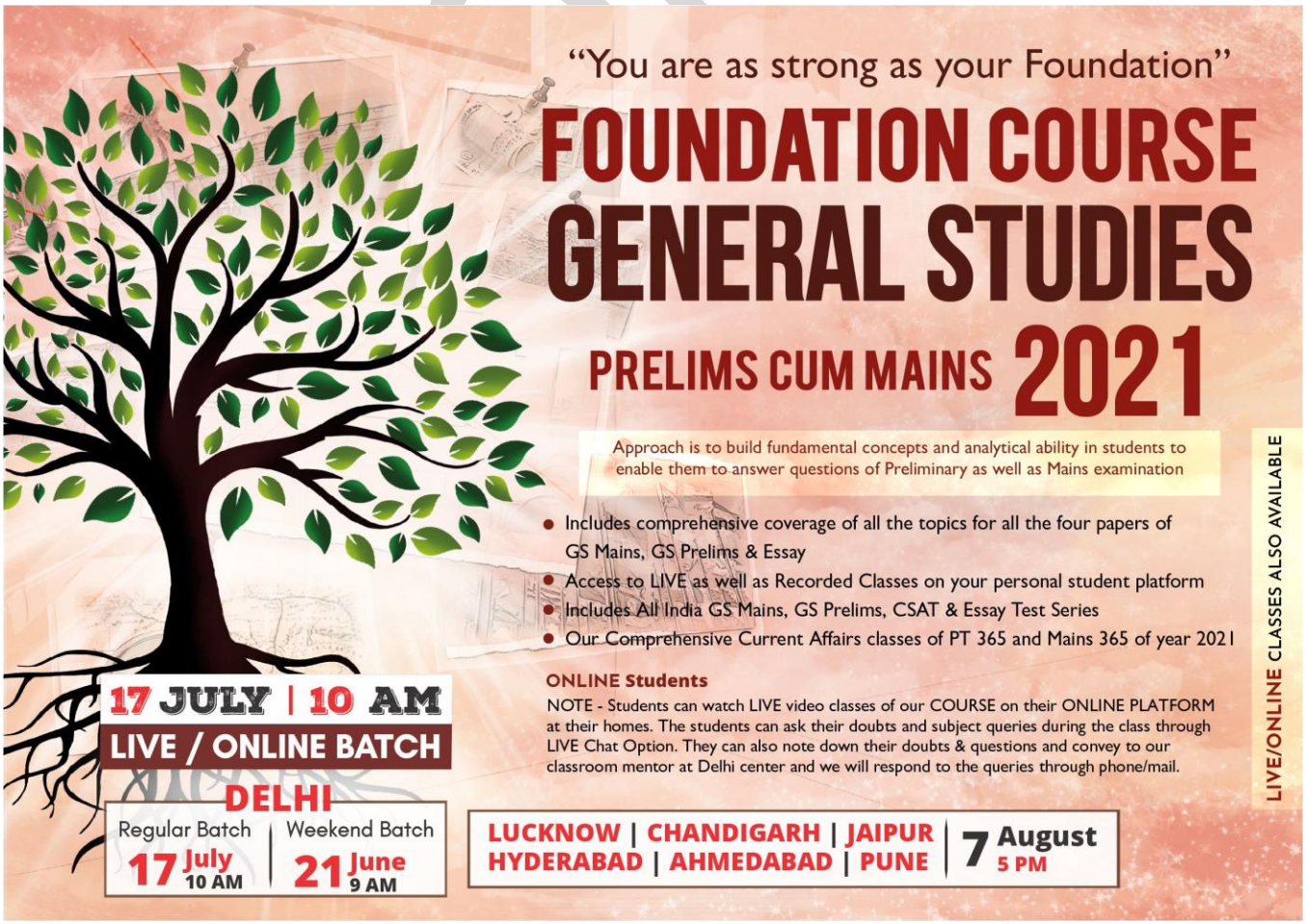
Why in news?

The **Ministry of Housing and Urban Affairs** celebrated the 5th anniversary of the Urban Missions – PM Awas Yojana (Urban), AMRUT (Atal Mission for Rejuvenation and Urban Transformation) and the Smart Cities Mission.

About the urban missions

Scheme	About the scheme	Key initiatives taken and Achievements	Challenges/Key issues
Pradhan Mantri Awas Yojana (Urban) PMAY(U)	• To provide **pucca houses** to all eligible beneficiaries of urban India **by 2022** with the vision of '**Housing for all'**. • **Eligible beneficiaries:** ○ Economically weaker section (EWS) ○ Low-income groups (LIGs) ○ Middle-Income Groups (MIGs). • The **annual income cap** is up to Rs 3 lakh for EWS, Rs 3-6 lakh for LIG and Rs 6 to 18 lakhs for MIG.	• **More than 4000 cities** have been included in the mission and **1.05 crore houses** have been **sanctioned**. • **Employment** for more than **1.65 Cr persons** has been generated through forward and backward linkages. • **Affordable Rental Housing Complexes** launched as a **sub-mission** for providing ease of living to people from **EWS/LIG categories** including laborers, urban poor etc. • **Light House Projects (LHPs) under Global Housing Technology Challenge-India (GHTC)** being implemented in 6 States. ○ GHTC aims to identify and mainstream a basket of innovative technologies from across the globe that are sustainable and disaster resilient. • **Angikaar campaign** (for beneficiaries of completed houses) aimed to create **awareness on best practices** of water & energy conservation, sanitation and waste management, through **behavior change and convergence** was launched.	• Out of the Housing **demand** for 1.12 crores, only 34.4 lakh (around **30%) have been completed.** • More than **85% sanctioned houses** are in sates other than North East and hilly states. • **Under funding:** Of the total approved investment of Rs 6.37 lakh crore, only Rs 72,000 crore has so far been spent. • **Unavailability of land** and **higher construction costs in urban areas** are other issues halting the progress of the scheme.
Atal Mission for Rejuvenation and Urban Transformation (AMRUT)	• **The objective** is universal **water supply**; improvement in **sewerage** network; developing children and Divyang friendly **green spaces and parks**; improvement in **storm water drainage** and **non-motorized urban transport.** • It spans **across 500 cities**, covering more than **60% of the population.**	• Since launch**, 78 lakh water tap connections, 45 lakh sewerage and septage connections** have been provided. • **Online Building Permission System (OBPS)** is implemented across 444 AMRUT cities aimed at reducing the overall time taken for approvals of building plans, while ensuring a seamless process. • **Water ATMs installed** to dispense drinking water as cheap as **Re.1 per litre**	• **Targets not achieved:** More projects are being implemented in the green space cover and parks rather than the primary concerns of water supply and sewerage management. • **Imbalance in the functions and Finances of Urban local Bodies**

		and facilitate people to get 24x7 clean and safe drinking water. • **Fecal Sludge Treatment Plant** as low-cost option for treatment of fecal sludge & septage taken up in in various states. • Capacity creation in **waste water treatment,** including water recycling capacity, installing energy-efficient LED streetlights were taken up.	**n**eed to be rectified by strengthening 74th Constitutional amendment Act.
Smart Cities Mission (SCM)	• To strengthen urban infrastructure through application of '**smart' solutions** and provide a **better quality of life** to its citizens. • **Coverage**: 100 cities • **Strategies under the mission** ○ **Strategic components of Area-based development** in SCM are city improvement (retrofitting), city renewal (redevelopment) and city extension (Greenfield development) ○ **Pan-city initiative**: **Smart Solutions** are applied to cover larger parts of the city.	• **5151 projects** worth **Rs. 2 lakh crores** have been **approved.** • **Integrated command and control systems** developed under the mission helped in **management of COVID-19 crisis.** • **SCM** is helping cities in raising finance through **Municipal Bonds.** • **Smart Roads** that ensure safe access to all routes as well as free spaces for users. • **Smart solar energy as SCM requires cities to have** at least 10% energy coming from solar and at least 80% buildings to be energy efficient and green. • **Smart water** ensuring 24x7 water supply through Performance Based Management Contracts.	• **Projects implementation falls short of targets:** Only about 30% of the projects have been completed so far.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2. INTERNATIONAL RELATIONS

2.1. INDIA-AUSTRALIA RELATIONS

Why in news?

Recently, the **first ever virtual bilateral summit** was held between Prime Ministers of India and Australia.

Key Outcomes of the Summit

- Elevated the bilateral Strategic Partnership to **Comprehensive Strategic Partnership.**
- **Elevated the "2+2" engagement** to the **level of Foreign and Defence Ministers (from secretary level)**, where **strategic discussions** will be taking place **every two years**. India already has such mechanism with USA and Japan.
- MOU on cooperation in the field of **mining and processing of Critical and Strategic minerals.**
- Mutual **Logistics Support Agreement** was signed.
- **Joint declaration** on shared vision for **Maritime Cooperation** in the **Indo- Pacific region.**

Overview of India- Australia Relations

- **Background**
  - During the **cold war period, Australia** was United States' **closest ally**, while **India** opted for **non-alignment**.
  - The **end of the Cold War** and launch major economic reforms in 1991 provided the **first positive move** towards development of closer ties between two nations.
  - This could not last long as **India's nuclear status** outside the nuclear Non-Proliferation Treaty (NPT) resulted in Australia taking a particularly **strong stance against India's 1998 nuclear tests.**
  - In 21st century, with the **changing global scenario**, Australia looked at India as an important partner in **promoting regional security and stability**.
  - This led to **up gradation of bilateral** relationship to a **'Strategic Partnership'**, including a Joint Declaration on **Security Cooperation in 2009**.
- **Economic and commercial relations**
  - Bilateral **goods and services trade** between two was $30.3 billion in 2018-19, and the level of two-way **investment was $30.7 billion in 2018**.
  - In 2018, Australia announced implementation of "**An India Economic Strategy to 2035"**, a vision document to shape India- Australia bilateral ties. India is also preparing an **Australia Economic Strategy Paper (AES)** on similar lines.
  - Two countries have decided to re-engage talks on a **Comprehensive Economic Cooperation Agreement (CECA)** (Talks started in 2011, last being in 2015).
- **Defence and security cooperation**
  - **Civil Nuclear Cooperation** Agreement was **signed 2014** between two, enabling India to secure uranium from Australia**.**
  - Both also signed **Mutual Legal Assistance Treaty** (MLAT), Extradition Treaty and the Social Security Agreement.
  - **Maritime Security cooperation** is seen in the form of joint exercises like **AUSINDEX 2019, AUSTRAHIND, Exercise Pitch Black** and **Kakadu biennial exercise** (Hosted by the Australian Navy).

An India Economic Strategy to 2035

- It is a **three-pillar strategy** with focus on building a sustainable long-term economic strategy.
- It **identifies 10 sectors and 10 states** in Indian market where Australia has competitive advantages, and where it should focus its efforts.
- These are divided into a flagship sector (education), three lead sectors (agribusiness, resources, and tourism) and six promising sectors (energy, health, financial services, infrastructure, sport, science and innovation).
- **Three pillars include**: Economic ties, Geostrategic Engagement and Rethinking Culture-thrust on soft power diplomacy.

Some concerns in India-Australia relations

- **Comprehensive Economic Cooperation Agreement (CECA)** still remains inconclusive after 9 rounds of negotiations.
- **India opted out from Regional Comprehensive Economic Partnership (RCEP)**. Among other things, **India and Australia could not agree** regarding market access over agriculture and dairy products.
- **Australia's economy is heavily dependent on China,** with China being **Australia's largest trading partner**, accounting for 26 % of its trade with the world.

- **Science and Technology**
  - **An Australia-India Strategic Research Fund** was established in 2006 for scientists to collaborate on leading-edge research.
  - Agreement on **Cyber and Cyber-Enabled Critical Technology** was signed recently to promote cooperation in the areas of digital economy, cyber security, critical and emerging technologies.
- **Global cooperation**
  - **Chinese aggression and assertive foreign policy** are common concerns and has brought both the democracies closer.
  - Both have shared interests in vision of a **free, open, inclusive and rules-based Indo-Pacific region**.
  - **Australia's Pacific Step Up** and **India's Forum for India-Pacific Islands Cooperation (FIPIC)** reaffirm their cooperation in the **South Pacific region.**
  - Both co-operate in various multilateral fora including **QUAD security dialogue**, Indian Ocean Rim Association (IORA), ASEAN Regional Forum, G-20, East Asia Summits etc.
- **People to People Relations**
  - Indian diaspora, estimated at nearly 7 lakh is the **fastest growing in Australia** and has become positive factor in bilateral relations.
  - Almost 1 lakh **Indian students enrolled for studying in Australia.** Under **New Colombo Plan** (which aims at increasing exchange in the Indo-Pacific region) of Australian government, Australian undergraduates have studied and completed internships in India.
  - Australia agreed to help in establishing a **world class Sports University in India.**

Conclusion

- The prospects for bilateral relationship are recognized in both countries as **strategically useful**, **economically productive** and aligned with each other's new agenda**.** However, it is recognized that the natural synergy has so far **not been exploited fully.** Countries should conclude CECA at the earliest, to realize the economic opportunities.
- Based on several commonalities and closely aligned values in principles of **democracy, liberty, the rule of law, human rights, freedom of speech, free press and multiculturalism** both shall enhance the bilateral relationship by expanding engagement in various sectors like **defence industry and commercial cyber activity etc.**

2.2. E-DIPLOMACY

Why in news?

The first ever **India Australia virtual summit** in the wake of COVID-19 crisis has brought the **concept** of **e-diplomacy** to limelight.

More on news

- Globally, many nations have taken to **e diplomacy routes** to keep the momentum of foreign relations going, amid COVID-19.
- Other recent summits like **Extraordinary virtual G20 Leaders' Summit, SAARC virtual summit, Non-Aligned Movement Summit** have been held virtually.

About e diplomacy

- **E diplomacy** is the use of **internet and communication technologies b**y nations to define and establish **diplomatic goals and objectives** and to efficiently carry out the **functions of diplomats.**
- These **functions include** representation and **promotion of the home nation**, establishing both **bilateral and multilateral relations**, **consular services** and **social engagement**.
- **Advantages**
  - **Continuum of diplomacy and physical safety in extra-ordinary situations:** In times of crisis like the ongoing Pandemic, e-diplomacy mitigates the physical contact between leaders and ensures their safety along with progressing diplomatic talks.
  - **Economically prudent:** This also saves huge amounts of national money by omitting costly travels and lavish events.

- **Efficient time utilization:** Reduced travel time also allows the diplomats to invest more time in policy making and better engagement strategies.
- Much of foreign ministry's **energy goes into organizing visits**, but the follow-up has always been hard. Virtual diplomacy makes **high-level engagement less burdensome**.

- **Challenges**
  - **Decreased productivity:** E-diplomacy **cannot replace** face **to face interactions, backdoor consultations and negotiations** that form the heart and soul of traditional diplomacy.
  - Virtual summits **cannot fulfill the broader political goals and bigger objectives** in minds of the Heads of states. Major breakthroughs or deals requiring direct intervention of leaders may not materialize.
  - Virtual summit **could reduce the spontaneity and candour of conversations**. It is arguable whether new ideas or proposals which entail geo-strategic alignments can emanate out of e-summits.
  - **Cyber security issues:** Cybercrimes like hacking, threat of classified and sensitive information leaking may threaten national security.

Conclusion

Despite limitations and being in initial stages, e-diplomacy can act as **a persuasive and timely supplement** to traditional diplomacy. Countries can utilize this opportunity to incorporate e-diplomacy into follow up discussions for increased interaction and engagements and furthering the goals of diplomacy.

2.3. INDIA'S ENERGY COOPERATION WITH NEIGHBOURING COUNTRIES

Why in news?

Recently India and Bhutan signed a pact for first joint venture hydropower project.

More on news

- The 600 MW **Kholongchhu project** is part **of four projects** agreed in 2008, other three being Bunakha, Wangchhu and Chamkharchhu.
- It is a **50:50 Joint Venture** between Sutlej Jal Vidyut Nigam, Himachal Pradesh PSU and Bhutanese Druk Green Power Corporation.
- **Guidelines for Import/ Export (Cross Border) of Electricity- 2018** issued by the Ministry of Power facilitates import/ export of electricity between India and neighbouring countries.

India's Energy cooperation with neighbouring countries

- **India-Bhutan:** Both countries signed, **India and Bhutan framework agreement on hydropower development and trade**, in 2006 to develop 10,000 MW of hydropower by 2020.
  - Key projects include, **Tala hydropower project** (1,020 MW) and **Dorjilung hydropower project (1,125 MW)** (trilateral cooperation between Bhutan, India and Bangladesh).
- **India-Nepal Electricity trade:** Both signed **Power Trade Agreement in 2014** that commits both countries to buy and sell electricity during times of shortages.
  - There are **22 cross border power exchange facilities** operational between two.
  - **Mahakali Treaty** was signed in 1996 for development of **Pancheshwar Multipurpose Project**.
- **India – Bangladesh Electricity trade**
  - **MoU was signed in 2010** between two for bilateral Co-operation in the areas of **Power and establishment of grid connectivity.**
  - India currently supplies **about 1,200 MW power** to Bangladesh, to be increased to over 2,500 MW by 2021**.**
- **India-Myanmar:** Currently, Interconnection transmission line from Moreh (Manipur) to Tamu (Myanmar) transports electricity from India to Myanmar.

Some successful regional energy cooperation arrangements across the world

- **Greater Mekong Sub-Region** comprising Cambodia, China, Laos, Myanmar, Thailand, and Vietnam had an **estimated saving of $14.3 billion, due to the substitution of fossil fuel generation with hydropower**.
- **Southern African Power Pool** is an international power pool in 12 African countries that aims at **providing reliable and economical electricity supply** to the consumers in the region.
- **The Nordic Pool** is wo**rld's first international exchange for power trading** and sourcing power from different sources like hydro, thermal, nuclear, wind and solar etc.

Benefit of energy cooperation with neighbouring countries

- **Utilization of untapped hydropower potential:** Hydro power potential in Bhutan and Nepal together is 1,13,000MW and in North East India is 58,000 MW.
- **Effective use of seasonal complementarities:** During **winter when the run of rivers become dry** Bhutan and Nepal import electricity from India. When other renewable sources are less potent like solar energy **during monsoon in India,** harnessing hydropower will help to meet required demand in such time period.
- **Reduced dependency on fossil fuel:** Harnessing potential of hydropower will reduce dependence on fossil fuels to generate electricity. It is estimated that India alone **can reduce 35,000 MW of coal fired power plants construction** during 2015-2040 period if the potential for cross-border electricity trade is effectively exploited.
- **Environmental benefits:** It is estimated that **India can reduce 6.5% of power sector CO2 emissions** during the 2015-2040 period if the potential for cross-border electricity trade is effectively exploited.
- **Create investment opportunities:** Creating cross-border interconnected systems will require strengthening the existing generation, transmission and distribution network across countries. This will create **substantial investment opportunities where private sector can participate**.
- **Economic and Financial Gains**: Providing stable electricity supply to the consumers across borders will promote industrial and commercial activities which in turn will lead to significant economic gains.
- **Economies of Scale:** Regional approach brings the desired economies of scale and hence lowers the cost of electricity generation.

Multilateral initiatives in South Asia for energy cooperation

- **South Asia Regional Initiative for Energy Integration (SARI/EI)** was launched in 2000 to promote energy security through increased trade, investment and access to clean sources of power and fuel.
  - **It covers 8 countries:** Afghanistan, Bangladesh, Bhutan, India, The Maldives, Nepal, Pakistan and Sri Lanka.
- **SAARC Framework Agreement for Energy Cooperation (Electricity)** was signed by all Member States of SAARC in 2014 to facilitate **integrated operation of regional grid across SAARC.**
- **South Asia Subregional Economic Cooperation (SASEC) Operational Plan 2016-2025** identifies Energy as one of the four-priority sectors for partnership among **SASEC members (Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, and Sri Lanka)**.

Challenges in cross border electricity transmission

- **Policy Challenges:** Lack of harmonious policy framework is a major hurdle towards development of a trans-border regional power market. E.g. National Electricity Policies do not have dedicated focus on development of a competitive market across neighbouring region.
- **Infrastructural / Technical constraints:** Absence of any Grid Discipline in cross border electricity trade. Limited transmission network for cross border electricity trade and significant T&D losses act as constrains.
- **Political Challenges:** Political stability and National security are a major cause of concern like tariff fixation has political backlashes, hence fixation of uniform tariff for electricity trade could be challenging.
- **Investment Challenges/ Financial Constraints**: Given the poor financial conditions of the state-owned utilities, investment has to be pumped in by the private sector with emphasis on foreign direct investment (FDI) to develop hydropower projects.

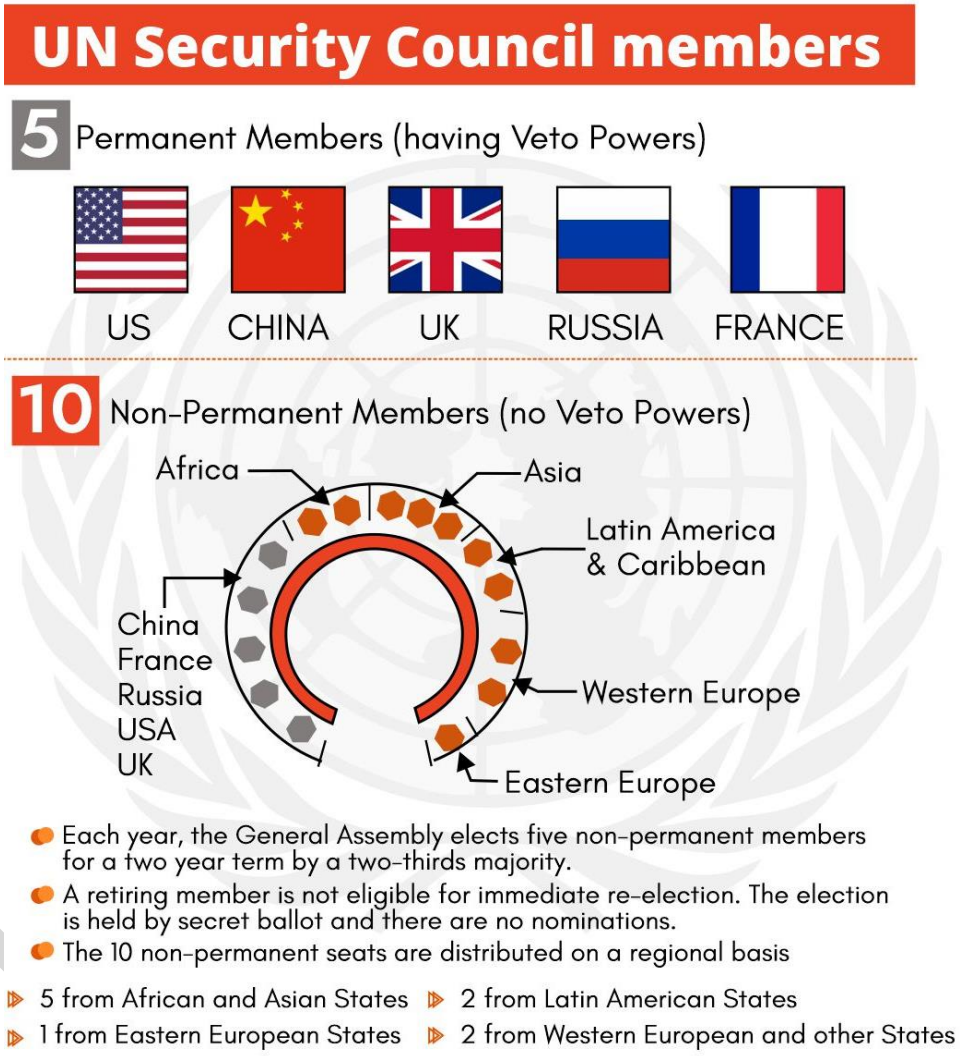
Way forward

- Ensuring energy availability and effective use of cross border electricity transmission **requires harmonious policy framework, cross border steering committee and independent multilateral regulatory body.**
- To exploit available hydropower potential in region private investment should be promoted though **foreign direct investment (FDI) and more financial assistance from Multilateral Financial institutions.**
- A **common platform should be formed for periodic knowledge exchange** amongst the policy makers, regulators, subject matter experts, research institutions, civil society organizations and media.

2.4. INDIA ELECTED NON-PERMANENT MEMBER OF UN SECURITY COUNCIL (UNSC)

Why in news?

India has been elected as a non-permanent member of the UN Security Council for a two-year term.


UN Security Council members
5 Permanent Members (having Veto Powers)
US
CHINA
UK
RUSSIA
FRANCE
10 Non-Permanent Members (no Veto Powers)
Africa
Asia
Latin America & Caribbean
China
France
Russia
USA
UK
Western Europe
Eastern Europe
Each year, the General Assembly elects five non-permanent members for a two year term by a two-thirds majority.
A retiring member is not eligible for immediate re-election. The election is held by secret ballot and there are no nominations.
The 10 non-permanent seats are distributed on a regional basis
5 from African and Asian States
2 from Latin American States
1 from Eastern European States
2 from Western European and other States

More on news

- India, the only endorsed **candidate from the Asia-Pacific States**, won 184 votes out of the 192 ballots cast in the elections. India's two-year term as the non-permanent member of the UNSC would **begin from January 1, 2021**.
- It will be **India's 8th term** as non-permanent member at the UNSC. Previously, India was elected for 1950-1951, 1967-1968, 1972-1973, 1977-1978, 1984-1985, 1991-1992 and most recently in 2011-2012.
- Along with India, Ireland, Mexico and Norway also won the Security Council elections for the non-permanent membership.

India's Priorities at UNSC

During the election campaign at UNSC, Ministry of External Affairs launched a brochure outlining India's priorities. According to it, **India will be guided by the five priorities** under the overarching theme of **NORMS: New Orientation for a Reformed Multilateral System**. These priorities include

- **New Opportunities for progress:** As a rule-abiding democracy and a positive contributor to the security of the global commons, India will work constructively with partners
  - to bring innovative and inclusive solutions to foster development
  - for greater involvement of women and youth to shape a new paradigm.
  - for a coherent, pragmatic, nimble and effective platform for collaboration to ensure sustainable peace in a rapidly shifting global security landscape.
- **An Effective response to international terrorism:** India will pursue concrete and result-oriented action by the Council aimed at:
  - addressing the abuse of ICT by terrorists
  - disrupting their nexus with sponsors and transnational organised criminal entities
  - stemming the flow of terror finance
  - strengthening normative and operative frameworks for greater coordination with other multilateral forums

- **Reforming the multilateral system:** Widespread concern at the inadequacy of the existing multilateral institutions to deliver results or meet new challenges.
  - Reformed multilateralism: a must for the post-COVID19 era.
  - A first and vital step is the reform of the Security Council. It must reflect contemporary realities to be more effective.
- **A comprehensive approach to international peace and security:**
  - India's vision for international peace and security is guided by: Dialogue and cooperation, Mutual respect, and Commitment to international law.
  - Streamlining UN Peacekeeping is an overdue task. Greater clarity, direction, and professionalism in UN Peacekeeping Operations must be ensured.
- **Promoting technology with a human touch as a driver of solutions:** India will encourage partnerships to harness the benefits of technological innovation to:
  - reduce human suffering
  - enhance ease of living
  - build resilient communities.

India will pursue these priorities through a **Five-S approach:** Samman (Respect), Samvad (Dialogue), Sahyog (Cooperation), Shanti (Peace) and Samriddhi (Prosperity).

2.5. EUROPEAN UNION VIETNAM FREE TRADE AGREEMENT (EVFTA)

Why in news?

Vietnam's National Assembly ratified the **European Union Vietnam Free Trade Agreement (EVFTA) and the EU-Vietnam Investment Protection Agreement (EVIPA)** paving the way for it to take effect.

More on news

- EVFTA is the **second FTA between the EU and an ASEAN country, after Singapore.**
  - It would **abolish 99% of customs duties**, eliminate bureaucratic hurdles by aligning regulatory standards for goods like cars and medicines, and ensure easier market access for both European and Vietnamese companies.
- This is the **first FTA that has been signed after the outbreak of the global COVID-19** pandemic that has resulted in a disruption of supply chains.
- **EVIPA,** a part of a free trade agreement (FTA), is an agreement between EU and Vietnam, which **aims to protect investors and investments in a host country**.
- In many segments, **India is closely competing with Vietnam**.
  - Since Vietnam has signed an FTA, India will have to **face major impacts in those segments** over a period of time.

Impact on India

- **Impact on domestic industries in many sectors: For e.g.** In **apparel sector** India needs to pay 9% (in the EU), while Vietnam will not pay any duty. Similar impacts would be seen in sectors like footwear and fishing.
- **Shift in investments:** Vietnam has emerged as a **preferred destination of many foreign companies** wanting to invest in Asia due to low labour cost.
  - According to recent report by Japanese investment bank, out of 56 companies that relocated out of China between April 2018 and August 2019, 26 decided to set up their new base in Vietnam.
  - Also due to EVIPA, **Vietnam will be attracting a lot of investments moving out of China** particularly those with the EU as their market.
- **Coupling with other FTAs:** European producers can invest in Vietnam and from there they can export further into other markets in Asia Pacific including a market like China because China and Vietnam are going to be part of a major FTA through the forthcoming **Regional Comprehensive Economic Partnership (RCEP).**

Way Forward

- **Concluding India–EU FTA:** India can nullify this advantage by concluding its own FTA stalled with EU since 2007.
  - A FTA may be the next big leap after the 1991 Liberalisation policy that India needs to hurtle towards its target of becoming a $5 trillion economy.
- **Labour reforms:** Vietnam has already ratified six of the eight International Labour Organisation standards. India can bring labour reforms as soon as possible to end the stalemates in potential FTAs.
- **Quality standards:** The best way forward in short term should be to undertake a comparative study of non-tariff measures such as quality standard.
- **Commodity specific agreements:** In the long term, **commodity-focussed trade agreements** can be a solution wherein a post facto analysis must be done to analyse whether the FTA brought the anticipated effect on the export of said commodity or not.

3. ECONOMY

3.1. MONETIZATION OF DEFICIT

Why in News?

Some economists including former RBI governor C Rangarajan have suggested that the government should **monetize the deficit.**

What is meant by Monetization of Deficit?

If the expenditure of the government exceeds its income, the government is said to have **incurred a fiscal deficit**. This **deficit financing** has to be done either by **borrowing from the market** or **monetisation of deficit through RBI.**

Primary vs. Secondary Market

- The primary market is where securities are created, while the secondary market is where those securities are traded by investors.
- In the primary market, companies sell new stocks and bonds to the public for the first time, such as with an initial public offering (IPO).
- The secondary market is basically the stock market and refers to the BSE, NSE, New York Stock Exchange, the Nasdaq, etc.

- In simple words, **monetization of fiscal deficits** involves the financing of such extra expenses **with money, instead of debt** to be repaid at some future dates. So, it is a form of "**non-debt financing**". As a result, under monetization, there is no increase in net (not gross) public debt.
- It can occur only through one of two modalities:
  - **Direct Monetization (DM):** Under this method, RBI prints new currency and purchases government bonds directly from the primary market (from the government) using this currency. As a result, this supports the spending needs of the government.
    - ✓ For instance, debt would originate if treasury were to simply borrow the money from the RBI therefore this would not constitute true monetization of the deficits.
  - **Indirect monetization (IM):** In this method, deficits are monetized as the **government issues bonds in the primary market** and the **RBI purchases an equivalent amount** of government bonds from the secondary market in the form of **Open Market Operations (OMOs).**
    - ✓ This modality replicates the same effects of the first if the central bank commits to the following actions: i) hold the purchased bonds in perpetuity, ii) roll over all the purchased bonds that reach maturity, and iii) return to government the interests earned on the purchased bonds.

Historical context on Monetization of deficit

- Monetisation of deficit **was in practice in India till 1997**, whereby the central bank automatically monetised government deficit through the **issuance of ad-hoc treasury bills.**
  - Treasury bills are money market instruments, are **short term debt instruments** issued by the Government of India and are presently issued in three tenors (91, 182 and 364 days).
- In 1994 and 1997, two agreements were signed between the government and RBI to **completely phase out funding through ad-hoc treasury bills.** Later on, with the enactment of Fiscal Responsibility and Budget Management (FRBM) Act, 2003, RBI was completely barred from subscribing to the primary issuances of the government.
- The **FRBM Act as amended in 2017** contained an **escape clause which permits monetisation** of the deficit under special circumstances.

What warranted such a step now?

As India battles the impact of the Covid-19 pandemic, economic indicators like tax revenue, government expenditure, household savings, demand as well as supply are adversely hit.

- **Combined fiscal deficit** of the central and the state governments **could cross 10% of the GDP** during this year which was about 7-7.5% last year.
- To meet this deficit, usually government has to borrow. However, these **borrowings increase government debt and negatively impacts debt-to-GDP ratio** which is already worsening because of growth slowdown and possible contraction because of COVID-19 lockdown.
  - India's debt-to-GDP ratio is likely to increase to 84% in FY21 from an already high level of 72% as per rating agencies like Moody's and Fitch.

Should monetization of deficit be implemented?

Arguments in favour	Concerns raised
• **Sovereign ratings:** all top 3 rating agencies i.e. S&P, Moody's and Fitch have placed India just one notch above the junk category status **(BBB-)** in terms of investment and this **sovereign rating is very likely dependent on stabilizing rising public debt** and debt-to-GDP ratio. A further downgrade may lead to flight of foreign capital from India. • **Prevents crowding out effect:** large scale domestic borrowing by government can make it harder for private sector to raise money and **interest rates can also rise** because of such competition. • **Similar expansion in Money supply:** it is argued that whether Central Bank acquires government bonds from secondary markets (through OMOs) or directly from Treasury, effect on money supply (all the currency and other liquid instruments measured in terms of M0, M1 etc.) is **similar as long as inflation is kept under control.** • **Less risk of inflation in immediate term:** transmission of **base money** (M0) to broad money (M3) is likely to be slow because of slower credit growth which leads to **lower velocity of money** (frequency at which one unit of currency is used to purchase domestically- produced goods and services within a given time period). This low velocity and lesser transmission reduces the inflation risk.	• **Rise in inflation in the long-term:** as opposed to temporary **expansion in money supply** in OMOs, monetization of deficit creates a more permanent one which can lead to inflation as more money is being pumped into economy which will stimulate demand/spending. • **Devaluation of rupee:** aggressive DM could devalue the currency, causing foreign investors to lose confidence and pull out money, putting the existing fiscal financing plan at risk. • **Possibility of Inefficient Spending:** usually fiscal profligacy is seen among governments when money is easily available to exploit and it may also lead to rise in corrupt practises.

Measures of Money Supply

- **Reserve Money (M0):** also called High Powered money, monetary base, base money etc. M0= Currency in Circulation+ Bankers' Deposits with RBI + Other Deposits with RBI.
- **Narrow Money (M1)** = Currency with public + Demand deposits with the Banking system (current account, saving account) + other deposits with RBI.
- **M2** = M1 + Savings deposits of post office savings banks.
- **Broad Money (M3)** = M1 + Time deposits with the banking system.
- M4 = M3 + All deposits with post office savings banks.

Conclusion

In this pandemic situation, at a time when demand and inflation are already low and unemployment is high, monetization is not likely to create negative effects as it does in normal situations. It **has the possibility to set off virtuous cycle** of liquidity easing, leading to a reduced level of insolvency and also a positive impact on the economy which will reduce debt-to-GDP ratio. Moreover, it is suggested that **past fiscal profligacy should not stop deficit monetisation and the decision should be based on present ground situation**.

Apart from that, the **government could look at innovative ways to shore up tax revenues**- like selling land banks or by stimulating demand by cutting GST and income-tax rates. Also, government would do well by prioritizing its expenditure.

3.2. SUSPENSION OF INSOLVENCY AND BANKRUPTCY CODE (IBC)

Why in News?

Recently, **an ordinance was approved to amend the IBC** so as to provide relief for corporates as the pandemic and subsequent lockdown had significantly impacted economic activities.

About the ordinance

- Section 10A has been introduced thereby suspending Sections 7, 9 and 10 of the IBC.
  - It states that no application shall **ever be filed** for **initiation of corporate insolvency** resolution process of a corporate debtor for any default arising on or after 25th March, 2020 for a period of six months which could be extended up to a year.
  - While sections 7 and 9 provide for initiation of insolvency proceedings by **financial creditors and operational creditors**, respectively, section 10 is for initiation of insolvency resolution proceedings by a corporate applicant.

Rationale of the move

- **Economic stress because of COVID-19:** Industries are grappling with **supply chain breakdown, slowdown in demand, unavailability of labour and inability to complete contracts**. Moreover, service sectors such as

hospitality or aviation are facing **reluctance of the customers in indulging in such activities**. The by-product of this slowdown will be increased stress and **default by debt-laden Indian corporates**.

- **Tough IBC regime:** Under the IBC, an entity can seek i**nsolvency proceedings against a company even if the repayment (of more than 1 crore) is delayed by just one day**. The approach of Creditor-in-Control regime and strict time frame of resolution has created an environment where corporate debtors try to avoid IBC as they may lose control over management otherwise.
- **Concern on value recovery:** Of the total 221 resolved cases under IBC, just 44 per cent amount of debt has been recovered since the inception of the law in 2016. Moreover, for every one case resolved, four cases end up in liquidation, where the recovery falls down sharply to 15-25%. This means that creditors have to undergo large haircuts on their loans.
- **Huge litigation pressure on judiciary:** judicial system would not have been able to handle a huge influx of cases triggered by economic downturn.

Some important features of IBC

- **Covers**: all individuals, companies, Limited Liability Partnerships (LLPs) and partnership firms.
- **Adjudicating authority**: National Company Law Tribunal (NCLT) for companies and LLPs and Debt Recovery Tribunal (DRT) for individuals and partnership firms.
- The insolvency resolution **process can be initiated by** any of the stakeholders of the firm: firm/ debtors/ creditors/ employees.
- If the adjudicating authority accepts, an Insolvency resolution professional or IP is appointed.
- The **power of the management and the board of the firm is transferred to the committee of creditors (CoC)** which comprises of all financial creditors of the corporate debtor.
- The IP has to decide **whether to revive the company (insolvency resolution) or liquidate** it. If they decide to revive, they have to find someone willing to buy the firm.
- They choose the party with the best resolution plan, that is acceptable to the majority of the creditors (66% for critical decision and 51 % for routine decisions), to take over the management of the firm.
- The law prescribes that this insolvency resolution process has to be completed within **180 days**. It can be **extended by 90 days** if the case is complex. If a decision is not reached within the time frame, the firm will be liquidated.

Concerns regarding suspension of IBC

- **Ballooning of liabilities without resolution:** when creditors and even corporate applicant itself can not initiate the insolvency proceedings, it **may restrict the exit** of a business and **lock-up its assets**, thereby further deteriorating their value and leading to losses.
- **Use of alternative debt resolution mechanisms:** suspension will negate the two states objectives of **faster resolutions and value maximization under IBC** and creditors will be forced to turn to older adhoc mechanisms (see box) to address defaults.
    - Diversion from IBC to other methods may alternatively result in myriad recovery cases and enforcement of security cases being filed, thereby burdening the courts further.
- **Mounting NPAs:** in the absence of any definite and timely resolution, NPAs of banking sector may rise which may lead to increment in lending rates, hamper the investment and credit cycle and lower investor confidence. This will hamper the potential growth of economy in long run.
- **Higher provisioning norms for Banks: Prudential Framework for Resolution of Stressed Assets** by RBI requires the lenders to undertake a prima facie review of the debtor upon the occurrence of a default. It provides a system of disincentives in the form of additional provisioning for delay in implementation of resolution plan or initiation of insolvency proceedings.
- **Potential of misuse:** as proceedings under IBC can never be filed for default occurring in the suspension period, so:
    - Promoters of companies that have the capacity to repay dues could **force a default during this period** and never be held accountable under the IBC.
    - While only pandemic-related cases should get the benefit of this reprieve, it will be **tough to pinpoint this as the reason for the non-servicing of loans.**
    - It can **adversely affect operational creditors**, such as vendors and suppliers, as they would not be able to file insolvency proceedings that may lead to artificial delays in payments accrued to them by corporate debtors.

Alternative methods of debt recovery

- Creditors can take possession and sell immovable properties under **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFAESI 2002)** or file a criminal complaint for dishonoured cheques for recovery of outstanding money under Negotiable Instruments Act 1881.
- **Corporate restructuring scheme under Section 230-232 of the Companies Act:** scheme process is premised on 'debtor-in-possession' and scheme is binding on the company and all its creditors and shareholders.

- **No suspension against personal guarantors of a company:** if directors or promoters of a company have provided personal guarantees to its lenders, they may still be taken to the insolvency court under IBC.
- The **ordinance does not grant any relief to such applicants whose resolution plans recently got approved.** Their ability to implement the said plans will be directly impacted by such disruptions going forward.

Way Forward

India will do well by addressing the above concerns. Further, other countries are flattening the bankruptcy curve by adopting methods like:

- In **Germany**, two conditions have to be satisfied by the corporate debtor for a suspension. First, the reason for insolvency must be based on the effects of the pandemic. Also, under scrutiny would be the prospects of restructuring the company.
- The **United Kingdom** has allowed for a much shorter moratorium without the creditor approval.
- In **Singapore**, to get the benefit of the moratorium, corporate debtors have to prove they were unable to perform a contract because of COVID-19 pandemic.

Finally, in view of the suspension of the IBC, the government must do the necessary reforms to create an alternative framework. In the absence of this, financial health of companies may deteriorate leading to value-destruction which should not be an unwanted consequence of this move.

3.3. BANKING REGULATION (AMENDMENT) ORDINANCE 2020

Why in news?

President recently promulgated the **Banking Regulation (Amendment) Ordinance 2020.**

Background

- The Ordinance seeks to amend the **Banking Regulation Act, 1949 (Act),** which regulates the functioning of banks and provides details on various aspects such as licensing, management, and operations of banks.
- It aims to bring all the **Urban Cooperative Banks (UCB) and Multi State Cooperative Banks** under the direct supervision of Reserve Bank of India (RBI).
- Earlier, **Punjab and Maharashtra Cooperative (PMC) Bank crisis** due to irregularities like fraudulent loans, excessive lending **brought into focus the poor condition** on the management and regulation of UCB in India.
- Also, recently, RBI had **cancelled licenses of two Co-Operative Banks** 'The Mapusa Urban Co-operative Bank of Goa Ltd' and 'The CKP Cooperative Bank Ltd' over poor performance.
- In this context, to give RBI more powers over regulations of UCBs, **Banking Regulation (Amendment) Ordinance 2020 was promulgated.** Earlier, **Banking Regulation (Amendment) Bill, 2020** was introduced in Lok Sabha, but could not be passed.

Key features of the Ordinance

- Ordinance **also allows RBI to make a scheme of reconstruction or amalgamation of a banking company without imposing moratorium**. Earlier, RBI had to **first place a bank under a moratorium** before preparing a revival scheme for stressed bank.
- Under the original Act, **during moratorium, no legal action can be initiated or continued against the bank** for a period of up to six months. Also, the bank cannot make any payment or discharge liabilities during this period.
    - Ordinance adds that during the moratorium**,** the **bank cannot grant any loans or make investments in any credit instruments.**
- Ordinance allows UCB **to issue equity shares, preferential shares, special shares**, unsecured debentures or bonds with the **prior approval of the RBI.**
- Ordinance enables RBI **can supersede board of a UCB registered under a State Law,** after consultation with the concerned state government.
    - Under the Act, it was allowed only for **multi-state cooperative banks.**
- Ordinance **does not affect existing powers of the State Registrars of Co-operative Societies** under state co-operative laws.
- The amendments **do not apply to Primary Agricultural Credit Societies (PACS)** or co-operative societies whose primary object and principal business is long-term finance for agricultural development.

Benefits of the Ordinance

- Putting a bank under moratorium **often leads to panic and loss of confidence in the banking system among the public.** RBI is now being allowed to deal with stressed banks without creating panic among the public or disruption in the financial system.
- With the Ordinance, Banking Regulation Act will **enjoy supremacy over cooperative banks**. Power of RBI to remove management or draw up plans to merge/dissolve cooperative banks will **override the power of the state registrar of cooperatives**. This will **address issues concerning poor management** of cooperatives, which was earlier out of reach of RBI.
- The provision to **allow cooperative banks to raise capital through securities** will help increase capital base for cooperative banks. **Equity capital acts as a buffer to protect depositors from smaller losses of the bank.**
- Jurisdiction of RBI will bring **more transparency in the working of the co-operative banks** and the interest of the depositors will be safeguarded.

About Cooperative Banks

- Co-operative banks are **financial entities** established on a **co-operative basis** and belonging to their members. This means that the **customers** of a co-operative bank are also its **owners**.
- **Classification-**
  - **Rural**
    - Short-term credit institutions
      - ✓ State cooperative banks
      - ✓ District Central cooperative banks
      - ✓ Primary Agricultural Credit Societies
    - Long-term credit institutions
      - ✓ State Cooperative and agriculture rural banks
      - ✓ Primary Cooperative and agriculture rural banks
  - **Urban**
    - Scheduled or non-scheduled Cooperative Banks
    - Single-state or multi-state Cooperative Banks
- Urban Cooperative Banks (UCBs) are **registered as cooperative societies** under the provisions of, either the **State Cooperative Societies Act of the State concerned or the Multi State Cooperative Societies Act, 2002.**
- UCBs in India are under **dual regulation**, by RBI and the Registrar of Cooperative Societies (RCS) under the government.
- Banking operations are **regulated and supervised by the RBI**, which lays down their capital adequacy, risk control, lending norms, issuing licenses, new branches etc.
  - They are governed under two laws, namely, **the Banking Regulations Act, 1949**, and the **Banking Laws (Co-operative Societies) Act, 1955**.
- **Registration and management related activities** are governed by the **Registrar of Cooperative Societies (RCS)** in case of UCBs operating in single State and **Central RCS (CRCS)** in case of multi-State UCBs.

Challenges that still persist for UCBs

- **Structural issues:** Most UCBs are **single-branch banks** and have the problem of **correlated asset risk.** This means the **entire bank can come down** if there is a local problem of significant scale.
- **Operational issues**: UCBs face **stiff competition from other financial institutions** such as small finance banks, payment banks, NBFCs and so on. As a result, they offer **unreasonably high interest rates** to depositors.
- **Simultaneous jurisdiction of both Co-operative Societies Acts and the RBI** appears to be parallel and overlapping as there is **no identified dichotomy** in their respective jurisdictions.
- **Management issues:** Many of the **UCBs are dominated by vested political interests**, which leads to interference in functioning like, **favoritism** in appointments, sanction of **fraudulent loans** which are **later written off**, and forcing government employees to hold salary accounts with cooperative banks and so on.

Way forward

- **Fair recruitment**: In order to improve efficiency, increase transparency and promote fairness, the decision-making processes pertaining to staff administration, granting of credit and new membership should be clearly laid down.
- **Independent auditing**: As suggested by **Madhava Rao Committee**, audit of UCB should be done by independent external auditors like commercial banks.
- Recently, RBI proposed **an umbrella Organisation for UCBs** which, apart from extending liquidity and capital support to its member UCBs, would also set up Information and Technology (IT) infrastructure to enable them to widen their range of services. This can be setup.
- **As ordinance gives more powers to RBI,** for it to regulate and supervise UCBs better, RBI also needs to ramp up its supervisory capacity.

3.4. PAYMENTS INFRASTRUCTURE DEVELOPMENT FUND

Why in news?

Reserve Bank of India (RBI) announced creation of a Payments Infrastructure Development Fund (PIDF).

About PIDF

- The **500 crores** PIDF seeks to **encourage acquirers to deploy Points of Sale (PoS) infrastructure** for both physical and digital modes.
- RBI will make an **initial contribution of ₹250 crore to the PIDF**, covering half of the fund.
- The remaining contribution will be from card-issuing banks and card networks operating in the country.

Points of Sale (PoS) machines

- Under the facility of cash withdrawal at PoS terminals, cardholders can withdraw cash using their **debit cards and open system prepaid cards issued by banks in India**.
- However, **credit cards cannot be used under this facility**.
- Cash can also be withdrawn at PoS terminals through **Unified Payments Interface (UPI) as well as through use of electronic cards** that are linked with overdraft facility provided along with Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts.

- It will also receive **recurring contributions** to cover operational expenses from card-issuing banks and card networks. **RBI will also contribute** to yearly shortfalls, if necessary.
- The PIDF will be **governed through an Advisory Council** and managed and administered by RBI.
- The setting up of this fund is in line with the **recommendations of the report of the committee on deepening of digital payments, chaired by Nandan Nilekani.**
- Last year, RBI announced setting up of **Acceptance Development Fund** to improve the last- mile payments network in rural India to transact digitally.

Other recommendations of Committee on Deepening of Digital Payments chaired by Nandan Nilekani

- **Removal of import duties** from point-of-sale (POS) devices and **waiving GST** on Immediate Payment Service (for transaction charges upto Rs 5000).
- **Government payments must be done through digital means**, including payments for goods and services procured, Direct Benefit Transfer, salaries and pensions.
- **Use of validation services such as Public Financial Management System and National Payments Corporation of India** to reduce the incidence of transaction failure because of wrong account / Aadhaar details.
- **Dedicated grievance redressal mechanism**, particularly in vernacular language to process connectivity and authentication errors in DBT.
- **Digital payment subcommittee** should be setup at state level to map financial institutions and identify gaps and RBI should develop a **Financial Inclusion Index** to compare different areas.

Expected benefits of PIDF

- It will help to **shift POS terminals concentration from tier 1, tier 2 cities to tier-3-6 cities and north eastern states,** which are left out due to high cost of merchant acquisition and merchant terminalisation.
- It will **give fillip to the digital payments** and improve infrastructure across the country especially **in the underserved areas**. As per S&P Global India's **card and mobile payments as a percentage of GDP rose to 20%** in the October-December quarter of 2019.
- PIDF will significantly **increase the merchant base** for accepting digital payments.

3.5. BILATERAL INVESTMENT TREATY (BIT)

Why in news?

As India attempts to attract investments, there have been calls to review India's model Bilateral Investment Treaty (BIT) 2016.

About Bilateral Investment Treaty (BIT)

- Bilateral investment treaties (BITs) are **treaties between two countries aimed at protecting investments** made by investors of both countries.
- These treaties **impose conditions on the regulatory behaviour of the host state** and limit interference with the rights of the foreign investor.
- Some of these conditions include,

International Centre for Settlement of Disputes (ICSID)

- ICSID is the world's leading institution devoted to international investment dispute settlement.
- ICSID was established in 1966 by the **Convention on the Settlement of Investment Disputes** for legal dispute resolution and conciliation between international investors.
- ICSID convention is **ratified by 155 countries**. **India is not a party to the ICSID convention.**

- **Restricting host state from expropriating** (take property from owner) **investments,** barring for public interest with adequate compensation;
- Imposing obligations on host states to accord **Fair and Equitable Treatment (FET) to foreign investment.**
- Allowing for **transfer of funds** subject to conditions given in the treaty.
- Allowing individual investors to **bring cases against host states** if the latter's sovereign regulatory measures are not consistent with the BIT.

- There is **International Centre for Settlement of Disputes (ICSID)** under investor-state dispute settlement (ISDS) mechanism for dispute redressal between international investors.

India and BIT

- India started signing BITs in **early 1990s and** signed the **first BIT with the United Kingdom (UK) in 1994**, since then India has signed BITs with 84 countries.
- **BITs have been one the major drivers of FDI inflows into India**. Total FDI to India has increased from $4,029 million in 2000-2001 to $43,478 in 2016-17.
- However, a **penalty awarded by an Investor-State Dispute Settlement (ISDS) tribunal** in the White Industries case in 2011, and subsequent ISDS notices **served against India** in a wide variety of cases involving regulatory measures **led to a review of the BITs.**
- Thus, India adopted **new model BIT in 2016,** moving somewhat to a protectionist approach concerning foreign investments. This model BIT is to serve as a **framework for the renegotiation of India's BITs worldwide.**
- Since its adoption, **India has unilaterally terminated 66-odd BITs between 2016 and 2019**. Since then, **India has signed just three treaties, none of which is in force yet.**

Current scenario of investment in India

- India ranked among the **top 10 for FDI** in 2019 and has rank **63 in World Bank's 'Ease of Doing Business** 2020, **still the foreign investment has remained at 2 per cent of GDP.**
- **FDI-equity inflows** to India during 2019-20 were $49.9 billion, substantially **lower than the annual flow of remittances** of $83 billion in the same period.

Key features and concerns in India model BIT 2016

- **Definition of Investment** in the Model BIT has moved **away from a broad asset-based definition of investment to an enterprise-based definition** where an enterprise is taken together with its assets.
  - **Concerns:** Definition contains **vague criteria** such as the requirement of **enterprises to satisfy 'certain duration' of existence without specifying how much**, or, investments having 'significance for development' without specifying what amounts to 'significant' contribution.
  - It heavily **narrows down the definition of "investment"** needed to qualify for BIT protection.
- **Most Favoured Nation (MFN):** MFN provision in BIT aims to create a level-playing field for all foreign investors by prohibiting the host state from discriminating against investors from different countries.
  - **India's model BIT completely excludes the MFN clause** to prevent foreign investors from taking advantage of provisions in other BITs by 'borrowing' them through the MFN clause.
  - **Concern**: Not having an MFN provision in the BIT means **exposing foreign investment to the risk of discriminatory treatment**, which could offer preferential treatment to one foreign investor over other.
- **Fair and Equitable Treatment (FET):** It means that the **foreign investor is protected against unacceptable measures of the host state by rules of international law** which are independent of those of the host state.
  - The **2016 Model BIT does not contain an FET provision** because ISDS tribunals often interpret this provision too broadly. Instead, it contains a provision entitled '**Treatment of Investments'** that **prohibits country from subjecting foreign investments to measures that constitute a violation of customary international law**.
  - **Concern**: It narrows down the scope of protection available to foreign investors because of **ambiguity in regarding how such breach will it be determined**.
- **ISDS Mechanism: In** 2016 Model BIT, India has qualified its consent to ISDS by requiring that a foreign investor should **first exhaust local remedies at least for a period of five years** before commencing international arbitration.
  - **Concern**: According to the '**Ease of Doing Business 2020' report**, India currently ranks 163 out of 190 countries in **ease of enforcing contracts**, and it takes 1,445 days and 31% of the claim value for dispute resolution. This **reduces confidence in foreign investors.**

Way forward

- As per studies, there is evidence that **BIT regime in India has played an important role in attracting foreign investment**. Thus, having a **balanced BIT regime would help foreign investors** to do business easier in India without due regulatory interventions to safeguard their investment.
- India is not just an importer but also an exporter of capital, hence **protectionist provisions under BIT may be reciprocated in host state** and reduce protection for Indian companies abroad.
- Significance of BITs for foreign investors in India also **assumes importance due to larger goals of India for good governance and strengthening of rule of law.**
- India's **desire to increase foreign investment inflows**, especially under projects like Make in India and liberalisation policies needs to adopt a more **balanced approach in the BIT model.**
- Also, to meet **objective of making domestic firms competitive and mobile in the value chain**, as envisaged in the Atmanirbhar Bharat package, there is need for favourable decisions on FDIs.
- Now, global companies are moving their investments away from China**,** thus, there is an opportunity **to review the BIT model from protectionist approach to a more pragmatic one**.

3.6. INTERNATIONAL COMPARISON PROGRAM OF WORLD BANK

Why in News?

Recently, World Bank released new PPPs for reference year 2017 under its International Comparison Program (ICP).

About ICP

- ICP is **worldwide data-collection initiative** that is managed by World Bank under auspices of UN Statistical Commission.
- The **main objective** of the ICP is to **produce comparable volume measures of GDP** and its expenditure components based on **Purchasing Power Parities (PPPs).**
- India has **participated in ICP rounds since its inception in 1970**. Ministry of Statistics and Programme Implementation is National Implementing Agency for ICP in India.
- India was **co-Chair of the ICP Governing Board** along with Austria for the ICP 2017 cycle.
- Next ICP comparison will be conducted for reference year 2021.

Related terms

- **Actual individual consumption** refers to all **goods and services actually consumed by households.** It encompasses consumer goods and services purchased directly by households, and services provided by non-profit institutions and the government for individual consumption (e.g., health and education services).
- **Gross fixed capital formation** is defined as the acquisi**tion of produced assets, including the production of such assets** by producers for their own use, **minus disposals of fixed assets.**
- PLI is **ratio of a PPP to its corresponding market exchange rate.** It is used to compare price levels of economies. If an economy's PLI is less than that of another economy, then its items or expenditure aggregates are less expensive than those in the other economy.

Data with respect to India

- In 2017, **India was third largest economy and accounted for 6.7% of global GDP** in terms of PPPs (US$ 8.05 trillion) as against China (16.4%) and United States (16.3%), respectively.
- **PPP of Indian Rupee per US$** at GDP level was 20.65 in 2017 (15.55 in 2011).
- **Price Level Indices (PLI) of India is 47.55** in 2017 (42.99 in 2011).
- India is also **third largest economy** in terms of its PPP-based share in **global Actual Individual Consumption and Global Gross Capital Formation.**
- India is **second largest economy in Asia-Pacific, accounting for 20.83% of regional GDP** in terms of PPPs with China first and Indonesia third.

Purchasing Power Parities (PPPs).

- PPP is the **rate at which currency of one country would have to be converted** into that of another country to buy **same amount of goods and services** in each country.
  - E.g. if a pair of shoes costs Rs 2500 in India. Then it should cost $50 in USA when the exchange rate at PPP is 50 between the dollar and the rupee.
- **PPPs numbers are**
  - Used to compare living standards across countries

- Used by World Bank to construct measures of global poverty
- Relevant for estimating non-traded goods and services such as price of taxi ride etc.

- PPP exchange rates are **relatively stable than market exchange rates.**
- However, PPP is **harder to measure than market-based rates** as ICP is a huge statistical undertaking, and new price comparisons are available only at infrequent intervals.
- Also, **ICP does not cover all countries,** which means that data for missing countries must be estimated.
- **Market-based exchange rate:** It is the exchange rate at which one **currency** will be exchanged for another in foreign exchange market. It is **determined by supply and demand factors** of currencies.

3.7. WORLD INVESTMENT REPORT 2020

Why in news?

The World Investment Report released by UNCTAD, focuses on trends in foreign direct investment (FDI) worldwide, at the regional and country levels and emerging measures to improve its contribution to development.

Key Finding

- **FDI flows to South Asia increased by 10% to $57 billion.** The rise was driven largely by a 20% increase in investment in India, the largest South Asian FDI recipient, to $51 billion**.**
- **India jumped from 12th position in 2018 to 9th in 2019** on the list of the World's top FDI recipient**s**.
  - **India is biggest FDI host in the subregion, with more than 70% of inward stock**
  - **Most of the investments were in the information and communication technology (ICT)** and the construction industry
  - **Singapore is the largest source of FDI in India** during the last fiscal. It was followed by Mauritius, the Netherlands, the US, Caymen Islands, Japan and France.
  - **US has the largest inflow of FDI** followed by China and Singapore
- **Global FDI flows will decrease by up to 40% in 2020, from their 2019** value of $1.54 trillion due to COVID-19 lockdown, supply chain disruptions and economic slowdown.
  - FDI is projected to decrease by a further 5% to 10% in 2021.
  - Investment flows are expected to slowly recover starting 2022.

United Nations Conference on Trade and Development (UNCTAD)

- Established **in 1964 as a permanent intergovernmental body**
- It is the principal organ of the United Nations General Assembly **dealing with trade, investment and development issues.**
- Its headquarters is in Geneva.
- **Reports published by it are:**
  - Trade and Development Report
  - World Investment Report
  - The Least Developed Countries Report
  - E-commerce and Development Report
  - Review of Maritime Transport
  - Technology and Innovation Report

3.8. EMPOWERED GROUP OF SECRETARIES AND PROJECT DEVELOPMENT CELLS

Why in news?

Government approves setting up of an Empowered Group of Secretaries (EGoS) and Project Development Cells (PDCs) in Ministries/Departments for attracting investments in India.

Empowered Group of Secretaries (EGoS)

- **Composition:** Cabinet Secretary is Chairperson, CEO of NITI Aayog is member.
  - **Other members**: Secretaries of various departments including Department for Promotion of Industry and Internal Trade, Department of Commerce, Revenue, Economic Affairs etc.
- **Objectives of EGoS**
  - To **bring synergies between Ministries/Departments** and among the Central and State Governments in investment related policies.
  - **Attract investment and facilitation to global investors** through fast track Investment Clearance.
  - **Facilitate investment in targeted manner** and maintain **policy stability and consistency** in investment environment.
  - **Evaluate investments** put forward by departments and further provide completion targets to respective departments.

Project Development Cell (PDC)

- PDC is approved for **development of investible projects in India** in coordination with central and state governments.
- It will **create projects with all approvals**, land available for allocation and with the complete Detailed Project Reports for adoption/investment by investors.
- It will **identify issues that need to be resolved** in order to attract and finalise the investments and put forth these before the Empowered Group.
- PDC will **conceptualize, strategize, implement and disseminate details** of investible project.

Expected benefits

- In current COVID-19 pandemic, as industries are thinking to diversify their investments in different localities, EGoS and PDC aim to **make India a more investor-friendly destination for domestic and FDI**.
- It will give **fillip to Aatmanirbhar Bharat Abhiyan** and boost the economy by opening up investment and employment in domestic industries to **realise vision of a $5 trillion economy** by 2024-25.
- **Ramping up industrial production** to help India become player **in the global value chain** and serve big markets in the U.S., the EU, China etc.

3.9. COMMERCIAL COAL MINING

Why in news?

Recently, government launched auction process of 41 coal blocks for commercial mining under 'Aatmanirbhar Bharat Abhiyan'.

Background

- India has the world's **fourth largest coal reserve** and is **second largest producer after China,** still India stands as **second largest coal importer**.
- To ensure **energy security through assured coal supply,** address poor working conditions etc., **coal mining was nationalised in 1973 by Coal Mines (Nationalisation) Act, 1973.**
- So, **private sector firms were only allowed to mine coal for use in their captive (own) use**, e.g. cement, steel, power and aluminium plants etc.
- However, in 2014, Supreme Court cancelled **204 coal mines/blocks** which were allocated between 1993-2014, on the grounds of C&AG report, alleging loss of 1.85 lakh crore to Government.
- Later the government brought in the **Coal Mines (Special provisions) (CMSP) Act of 2015** to allocate coal blocks through auction.
- Prior to the enactment CMSP Act, **coal mines were never given out through bidding**. Companies used to apply for coal blocks and rights were given to them after scrutiny by an inter-ministerial committee.
- Recently, government came with the **Mineral Laws (Amendment) Act, 2020** which amends the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act**)** and the Coal Mines (Special Provisions) Act, 2015, under which current auction process is launched.

Expected benefits of commercial coal mining

- **Economic gains:** Proposed auction of 41 coal blocks for commercial mining will **create more than 2.8 lakh jobs** and attract capital investment worth 33,000 crore. Allowing FDI in coal mining industry will **facilitate adoption of new technology.**
- **Reduction in imports**: Involvement of private players and investment by them will **help meet domestic coal requirement** and save forex reserve by reducing imports. The 41 mines proposed for auction **are expected to hit peak production of 225 million tonne (mt)** and expected to account for around 15% of India's total coal production in 2025-26.
- **Reduced cost to customer**: Higher production and surplus availability of coal, may **reduce the cost of electricity,** as currently coal-fired plants generate about 70 per cent of India's electricity.
- **Revenue to the Government**: It is expected that commercial coal mining will add **₹20,000 crore annually** to the state governments' revenue.
- **Development of the coal bearing regions**: Revenue generated through coal production will raise **contribution to District Mineral Foundation Fund** (setup under MMDR Amendment Act 2015) and could be spent on welfare schemes for locals and tribal in surrounding area.

Challenges

- **Cost of power production through renewable energy is increasingly getting lower**, hence private players also shifting investment in renewable energy sources rather than conventional sources like coal.
- Central Electricity Authority (CEA) expected that **coal-based thermal power plant's capacity utilization will fall to 48% by 2022**, as additional non-thermal electricity generation capacities rise. This might further discourage investors.
- CIL estimated that only about **21 billion tonnes (BT) could be extracted technically and economically**. Thus, India may run out of easily extractable coal down to the depth of 300 metres in the next few years. This will mean that companies will need to mine deeper, which would require increased mechanisation with an increase in the cost of production.
- Some states are raising concerns that **disregarding powers of state governments and Gram Sabha** to recognise mines allocation is **against cooperative federalism** and leads to loss of revenue to States/villages.
- There are **socio-economic concerns** like acquisition, rehabilitation and resettlement of people affected and risk of environmental degradation.

Other recent steps taken in coal sector

- The **coal linkages have been rationalized** in order to reduce the distance in transportation of coal from the coal mines to the consumer.
  - Under the **coal linkage policy**, power producers are linked to the coal producers. The commitments under the linkages are binding and the coal cannot be transferred to other consumers.
- Environment Protection Act was amended to **drop mandatorily washing coal** for supply to thermal power plant, citing reason it prompts industries to import coal. Instead, thermal power plants were **directed to install the technology for handling ash content.**
- Amendment in the **guidelines of preparation, processing and approval of Mining Plan** with simplified guidelines, and measures are being taken to formulate an **online single window clearance system.**
- Amendments were made to **Mineral Concession Rule 1960** to provide more flexibility in plan and operation.
- **Mineral Laws (Amendment) Act, 2020** includes provisions like removal of restriction on end-use of coal, Composite license for prospecting and mining etc. to promote ease of doing business in coal mining.
- **Announcements under Atmanirbhar Bharat Abhiyan,** including spending ₹50,000 crore on creating infrastructure for coal extraction and transport; **rebate on revenue share** payable to government for early production, producing excess of the scheduled target and for coal used in gasification etc.

Way forward

- Setting up of an **independent regulatory body** for the coal sector to carve out coal blocks, oversee investments and also carry out valuation. **Coal Regulatory Authority Bill, 2013** was introduced for this purpose, but was lapsed.
- There should be fine **balance between short-term cost savings and long-term environmental impact** by promoting **sustainable coal consumption** and **reducing waste discharge**, through combining smaller mining areas to develop into one single mine of large capacities.

*For more details on **Mineral Laws (Amendment) Act, 2020** refer MINERAL LAWS (AMENDMENT) BILL, 2020 article in March 2020 Monthly Current Affairs.*

*For more details on announcements under **Aatmanirbhar Bharat in coal sector** refer May 2020 Monthly Current Affairs.*

3.10. SOCIAL STOCK EXCHANGE

Why in news?

Expert panel setup by the Securities and Exchange Board of India (SEBI) has prepared draft norms for Social Stock Exchanges (SSE).

About Social Stock Exchanges (SSE)

- **Social Stock Exchange (SSE)** is an **electronic fundraising platform** that allows investors to buy shares in a **social enterprise** that has been vetted by the exchange.
- Social **enterprises include is a revenue-generating business** whose primary objective is to achieve a social objective, for example, providing healthcare or clean energy.

- Idea of a SSE for **listing of social enterprise and voluntary organisations** for raising capital as equity, debt or like a mutual fund was **mooted in the Union Budget 2019-20.**
- **Later, SEBI constituted panel** to suggest norms for SSEs.
- The most prominent SSEs in the world are in **UK, Canada, USA, South Africa, Singapore and Mauritius.**

Key recommendations of the panel

- Give **tax sops, such as an exemption** from the securities transaction tax (STT) and capital gains tax (CGT), to ensure that SSEs take off in the country.
- Make philanthropic donors be eligible to **claim 100% tax exemption** on investments**.**
- Allow **first-time retail investors to avail a 100 per cent tax exemption** on their investments.
- Setup INR **100 crore "capacity building fund"** to create a capacity building unit that will foster overall sector development.
- Consider **funding to non-profit organisations (NPOs) on SSEs** as corporate social responsibility (CSR).
- Allow **trading of CSR spends** between companies with excess CSR spends and those with deficient CSR spends on SSEs.
- Suggested **reporting and disclosure framework** to ensure transparency.
- **SSE can be housed within the existing** Bombay Stock Exchange and the National Stock Exchange **to enable leveraging of the existing infrastructure and client relationships.**

Benefits of Social Stock Exchange (SSE)

- This will **unlock funds** from donors, philanthropic foundations, Corporate Social Responsibility (CSR) spenders and impact investors **for social development**. As per Brookings India, **currently only 57% of the social enterprises** have access to debt and equity, which is barrier to growth and sustainability.
- Listing of social enterprises on an SSE **would also improve visibility of social enterprises** in the eyes of large investors and philanthropic organisations. Also, SSEs will **provide investors a better understanding of social sector** for routing their investment.
- **Banks, NBFCs and other investors can also raise capital from SSE** to participate in the growth journey of the social enterprises and thereby deepen their impact.
- SSE will help to **improve essential social services and important social sectors like education, health, agriculture and clean energy** by channelling greater capital to them.
- SSE is expected to **unlock large pools of social capital**, and encourage blended finance structures so that conventional capital can partner with social capital to address the urgent challenges of COVID-19.

Challenges in setting up SSE

- There is **no consensus about what is and isn't a social enterprise**. Prof Muhammad Yunus definition of social business can be adopted which who defined it as "a non-loss, non-dividend paying company which is created and designed to address a social problem."
- **Valuing social initiatives,** welfare and non-profits organisations is difficult, because there is no set benchmark, no uniform structures to set minimum thresholds to enable their listing.
- Apart from equity capital, social enterprises need debt particularly to meet working capital requirements, but **only handful of private impact investors provide debt to early-stage social enterprises.**
- India has **more than 2 million social enterprises** (non-profits, for-profits and hybrid model), which needs careful planning while designing a social stock exchange.

Way forward

- **Social impact assessment** can be adopted as way to **assess social initiatives**, welfare and non-profits organisations.
- **Bringing policy and regulatory reforms** to support investors and facilitating research and development for small social enterprises.
- **Educating market participants** about the valuation metrics weighing both on social and financial returns.
- **Transparency and accountability** can be achieved by online platform, similar to **NITI Aayog's Darpan portal**, which provides platform for interface between Voluntary organisations/ NGOs and Government Ministries.

3.11. INDIAN GAS EXCHANGE (IGX)

Why in news?

India's first gas exchange — the Indian Gas Exchange (IGX) — was launched recently as wholly owned subsidiary of **Indian Energy Exchange.**

About IGX

- It is a digital trading platform that will allow buyers and sellers of natural gas to trade **both in the spot market and in the forward market for imported natural gas** across three hubs —**Dahej and Hazira in Gujarat, and Kakinada in Andhra Pradesh.**
- **Imported Liquified Natural Gas (LNG) will be regassified** and sold to buyers through the exchange, removing the requirement for buyers and sellers to find each other.
  - The bidding is done in an anonymous manner, where the buyer and seller do not know their counterpart.
- The price of **domestically produced natural gas** is decided by the government and it will **not be sold on the gas exchange.**
  - Domestic production of gas has been falling over the past two fiscals as current sources of natural gas have become less productive.
  - Domestically produced natural gas currently accounts for less than half the country's natural gas consumption; imported LNG accounts for the other half. Hence, IGX encourages trading in imported LNG.
- The contracts traded at IGX are for **compulsory specific physical delivery and settlement** of the trade are subject to the condition that such contracts are non-transferable in nature.

Indian Energy Exchange (IEX)

- It is the **first and largest energy exchange** in India providing a nationwide, automated trading platform for physical delivery of electricity, Renewable Energy Certificates and Energy Saving Certificates.
- It is regulated by the **Central Electricity Regulatory Commission (CERC).**
- IEX is one of the two power exchanges in India. (Other being Power Exchange India Ltd (PXIL))

Spot and Forward Market

- The spot market is a public financial market in which financial instruments or commodities are traded for immediate delivery.
- A forward market is an over-the-counter marketplace that sets the price of a financial instrument or asset for future delivery.

Expected Benefits

- The exchange is expected to **facilitate transparent price discovery in natural gas**, and facilitate the growth of the share of natural gas in India's energy basket.
  - India has set a policy target of increasing the **share of natural gas in India's energy basket from current 6.5% to 15% by 2030.**
- Trading platform will also drive competition across the value-chain, leading to innovative business models and efficient cost-structures, thus supporting the overall affordability of gas.

3.12. REAL TIME MARKET IN ELECTRICITY

Why in news?

Recently, pan-India Real Time Market in electricity was launched.

About Real Time Market in electricity

- Real time market is **organised market platform** enabling buyers and sellers to meet their energy requirement closer to real time operation.
- Under this, auctions **will be held 48 times a day**, once every half an hour.
- It became operational on two platforms: **Indian Energy Exchange (IEX) and Power Exchange India Limited (PXIL)**.
- **Power System Operation Corporation Limited (POSOCO) will route electricity** from supply sources to consumption point with help of **Regional Load Despatch Centres**.
- To implement the **Real Time Market as amendments were made to**: Power Market regulations, Indian Electricity Grid Code (IEGC) Regulations, and Open Access in inter-state transmission regulations.

- Indian Energy Exchange Limited (IEX) is the **first energy exchange** in India, **providing automated trading platform** for delivery of electricity, Renewable Energy Certificates and Energy Saving Certificates.
- **Power Exchange India Limited (PXIL)** is India's first institutionally promoted power exchange providing electronic platform for transactions in power and allied products.

Power System Operation Corporation Limited (POSOCO)

- It is a wholly owned Government of India enterprise under the **Ministry of Power.**
- It facilitates competitive and efficient wholesale electricity markets and administer settlement systems.
- It **consists of 5 Regional Load Despatch Centres and a National Load Despatch Centre (NLDC)** to ensure integrated operation of the national power system with Reliability, Economy and Sustainability.

Benefits of Real Time Market in electricity

- **Ensure optimal utilization of the surplus electricity** as electricity producers, who may see generation more than their committed demand, **can sell surplus energy in market**.
- **Manage diversity in the demand pattern**, as electricity DISCOMS faced with sudden **shortage of supply can purchase energy**.
- Real Time Market would help to **mitigate challenges to the grid management due to intermittent and variable nature of renewable energy** generation (especially solar and wind energy). Thus, it can **lead to integration of higher quantum of renewable energy** resources into the grid.
- **Shorter bidding time, faster scheduling, and defined processes** will enable the participants to access resources throughout the all India grid for promoting competition.
- It will **lead to cost optimisation** of power purchase and serve consumers with **reliable power supply.**
- The **concept of 'gate closure' ensures firmness in schedules** during the hours of market operation. **Gate closure** implies the closure of the gate for trading in real-time market after which the bids submitted to the Power Exchange cannot be modified for a specified delivery period.

3.13. AGRIDEX

Why in news?

National Commodity and Derivatives Exchange (NCDEX) announced the commencement of trading in the country's first agriculture futures index called AGRIDEX

More on news

- NCDEX AGRIDEX **is India's first return based agricultural futures Index** which tracks the performance of the ten liquid commodities (both **kharif and rabi seasons**) traded on NCDEX platform.
  - **Ten commodities include** Castor seed, Chana, Coriander, Cotton Seed Oil cake, Guar Gum, Guar Seed, Jeera, Mustard Seed, Ref Soya oil and Soy bean.
  - No group of related commodities may constitute more than 40% of the total weightage in the index in order **to ensure diversification.**
- It will facilitate the **participants in hedging their commodity** risk based on price anticipation of the products.
- It is based on the **revised guidelines issued by the Securities and Exchange Board of India (SEBI),** which allowed futures trading in commodity indices.
- NCDEX has partnered with **National Stock Exchange (NSE) Indices**, a leading Index service provider, to maintain and disseminate real-time NCDEX AGRIDEX values.

Futures

- These are a **type of derivative instrument**.
  - A derivative is an instrument whose **value is derived from the value of one or more underlying** assets, which can be commodities, precious metals, currency, bonds, stocks, stocks indices, etc.
  - Common examples of derivative instruments are Forwards, Futures, Options and Swaps.
- In futures, there is an agreement to buy or sell a specified quantity of financial instrument or physical commodity in a designated future month at a price agreed upon by the buyer and seller.

About NCDEX

- It is the **country's leading agricultural commodity exchange**, which offers services across the entire value-chain of agricultural commodities.
- It offers a wide range of benchmark products across agriculture commodities.
- It **brings buyers and sellers together** through its electronic trading platform.

3.14. ANIMAL HUSBANDRY INFRASTRUCTURE DEVELOPMENT FUND

Why in news?

Cabinet Committee on Economic Affairs has recently approved the establishment of **Animal Husbandry infrastructure Development Fund** worth **Rs. 15000 crores**.

About Animal Husbandry Infrastructure Development Fund (AHIDF)

- AHIDF would facilitate **investments in establishment of infrastructure** for **dairy and meat processing** and **value addition infrastructure** and establishment of **animal feed plant** in the private sector.
- **Eligible beneficiaries:** Farmer Producer Organizations (FPOs), MSMEs, not-for-profit companies, Private Companies and individual entrepreneurs.

- **Funding**: Minimum **10% margin money** to be contributed **by beneficiary**. The **balance 90%** would be the **loan component** to be made available by scheduled banks.
- **Interest subvention:** Government of India will provide **3% interest subvention** to eligible beneficiaries.
    - There will be **2 years moratorium** period for **principal loan** amount and **6 years repayment** period thereafter.

Animal Husbandry Sector Statistics in India

- **During 2016-17,** the **value of output from livestock sector at** current prices is about **31.25%** of the value of output from **agricultural and allied sector**.
    - India continues to be the **largest producer of milk** in the world, with **per capita availability of milk 394 grams per day** during 2018-19. (**World** per capita availability is **229 grams per day**).
- As per the **latest and 20th Livestock census**, the total livestock population **is 535.78 million.**

- **Credit Guarantee Fund:** Government of India would also set up Credit Guarantee Fund of **Rs. 750 crores** to be **managed by NABARD.** Credit guarantee would be provided to those **sanctioned projects** which are covered under **MSME defined ceilings**.
- **Expected Benefits:**
    - **Investment:** AHIDF is expected to leverage around **seven times private investment**. It will ensure **availability of capital to meet upfront investment**, enhance **overall returns and pay back** for investors.
    - **Employment generation**: AHIDF would help in **direct and indirect livelihood creation** for **35 lakh** people.
    - **Benefit for Farmers**: Almost **50-60% of final value of dairy output** in India flows back to farmers. Thus, **growth** in this sector would **directly impact farmer's income**. Also, it would **motivate farmers to invest more on inputs** thereby driving higher productivity.
    - It would **promote exports** of the processed and value-added commodities.

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4. SECURITY

4.1. POLICE PREPAREDNESS DURING COVID-19 PANDEMIC

Why in News?

The ongoing health crisis due to COVID-19, coupled with the nationwide lockdown and economic hardships, has created a unique law and order challenge. So, Police which is one of the frontline responders to the pandemic often has to go beyond its call of duty.

Changing role of Police amid the pandemic

Generally, Police is seen as a State entity that enjoys power to uphold Personal security and Community security. However, this pandemic has strengthened and accelerated the need of Police to get involved into other aspects of Human security as well i.e. Economic security, Food and Health security and Environmental security (hygiene). More specifically, key areas of police role during pandemic are highlighted as follows:

- **Monitoring and Enforcement:**
  - Providing temporary quarantine and enforcing home quarantine, social distancing. For Ex. Kasaragode Police followed 'triple-lock' strategy in which police used traditional methods like barricades to restrict movement, human surveillance and app-based tracing and delivery of essentials and medicines.
  - Capacities nurtured over the years like Call Detail Records (CDR Analysis) of the mobile phones of the affected people, along with other cyber forensic tools have been used by the police to trace the contacts from affected persons.
  - Ensuring widespread use of masks and facilitating their distribution.
- **Public Awareness:**
  - Spreading information through various platforms like social media, speakers and dispelling misinformation. Ex: road paintings or coronavirus shaped helmets were used to spread awareness and to show the importance of hygiene.
- **Supply chain management:**
  - Issuing e-passes to allow smooth movement of supplies.
  - Using police control room (PCR) vans to facilitate last-mile delivery.
- **Migrants:**
  - Support local authorities in transport of stranded migrant workers to community spaces, government schools set up as temporary shelters.
  - Distribution of food, disinfecting transportation vehicles, ensuring social distancing at stations etc.
- **Reopening industries:**
  - Facilitate resumption of all kinds of work like construction, agriculture or manufacturing.
  - Support local authorities in conducting spot checks at work sites and enlist the support of Reserve Forces, Home Guards, National Cadet Corps, and other defence or policing forces to manage social distancing and hygiene when work resumes at sites.
- **Police Health:** Keeping older personnel away from frontline, plan for rotational shifts, maintaining quarantines for sick personnel and procuring and maintaining Personal Protective Equipment (PPE) in adequate quantities, including masks, gloves, hand sanitiser.
- **Organisation Structure:**
  - **Nodal Authority:** Have adequate teams in 24x7 shifts, Coordinate with other departments, Use geographic information system for better visualisation etc.
  - **Internal communication:** Conduct briefing and debriefing sessions, using recorded messages and regularly informing frontline officers about the latest orders and implementation thereof.
- **Proactive Community Policing:**
  - Coordinate with resident welfare associations and panchayats
  - Protect senior citizens by providing information and enabling services and groceries to the doorstep
- **Crimes:**
  - Keep some personnel available for regular crime prevention and investigation duties and respond to changing nature and intensity of crime. Ex. Domestic violence cases have increased during lockdown.
  - Active monitoring of social media through Cyber Crime Cell and Launch citizen-based campaign to report and deter cyber-crimes, including rumour mongering, cyberbullying, hate speech and fake news.

- **Prisons and Juvenile homes:** Monitor and prevent outbreaks among the detained population and inculcate hygiene and social distancing practises. Make arrangement for video calls with lawyers. Release select prisoners/undertrials on parole or bail. Reduce detention for minor crimes.

Challenges faced in fulfilling their roles

Even before Pandemic:

Status of Policing in India Report (SPIR) 2019 brought out by the **Centre for Study of Developing Societies** and **Common Cause** along with other organisations had pointed out various serious challenges that Police in India faced even before the pandemic, such as:

- **Lack of Police personnel**: The police in India works at 77% of its sanctioned strength and even at full capacity, India will be one of the weakest policed countries in the world.
- **High work load:**
  - Police personnel work for 14 hours a day on an average, with about 80% police personnel working for more than 8 hours a day.
  - Eight out of ten personnel do not get paid for overtime work.
- **Lack of housing facility:** For 17.21 lakh police personnel, only 5.80 lakh family quarters are available as per Bureau of Police Research and Development (BPR&D) data (2015).

During Pandemic:

- **Staffing**: If there is large-scale spread of the virus amongst members of the force or in their families, there could be significant drops in the available fighting strength of the force, which is already well below desirable levels
- **Ill-equipped**
  - They are out with **nil or little protective gear** — they wear the same substandard masks for days.
  - **Infrastructure on ground**, particularly police response vehicles are not fabricated with the necessary equipment to handle emergencies.
- **Ill-trained**
  - Over the last five years, on an average, **only 6.4% of the police force have been provided in-service training**, the SPIR found. Considering the additional protocols and risks involved in responding to a pandemic, this training falls grossly inadequate.
  - Police are trained to be rough and **necessary soft skills** to gain public confidence and respond to victims of trauma **are largely missing**.
- **Pervasive public refusal to adhere to the rules and regulations** is making their task even more difficult.
- **A standard operating procedure is absent** in various police departments on how to respond to various issues related to pandemic. For ex: there was much confusion regarding disposal and handling of dead bodies because of COVID-19.

Way Forward

- **Finance:** Seek funds via corporate social responsibility route through a special purpose vehicle with independent oversight to cover for any shortfalls in funding of Police.
- **Domestic and gender violence and child abuse:** Build local intelligence network to get alerts on such cases, ensuring active response on helpline numbers and coordinate with NGOs and medical and rehabilitation centres with and counselling support are needed.
- **Addressing Police high-handedness**: this aberration needs further professional standard settings, behavioural and ethical norm mainstreaming and training inputs.
- **Gaining public trust:** pandemic has strengthened the need for more collaborative ways of working and partnerships within and across the public and private sectors, moving towards a more inclusive approach that embeds societal responsibility.

4.2. "LONE WOLF" ATTACKS

Why in News?

Recently, a lone wolf attack was carried out by an individual in London.

About Lone wolf Attacks

- These attacks involve threat or use of violence by a **single perpetrator** (or a small cell).
- A lone wolf acts **without any direct support** of any other group or other individual in the **planning**, **preparation** and **execution** of the attack.
- Though lone wolf prefers to act totally alone, his or her radicalization to action maybe spurred by violent media images, incendiary books, manifestos, and fatwas.
- Ranging from threatening and intimidating people to **indiscriminate shootings, vehicle ramming, stabbing and suicide bombings**, lone wolf terror attacks have become a grave threat.
- Long-term data reveals the proportion of lone wolf attacks, has risen from under five per cent in the mid-1970s to above 70 per cent for the period between 2014 and 2018.
    - U.K. itself has seen 3 major incidents involving knife attacks since November, 2019.

Reasons for recent increase in Lone wolf attacks

- **Ease of radicalization through technology:** Number of online forums and social media profiles, where hate-speech and pro-terrorist sentiment flourishes, has increased. They act as source of inspiration and aid to forge connections to like-minded extremists.
    - Moreover, **existence of open access resources provide instructions** on how to prepare weapons have found widespread usage globally.
- **Mental illness**: According to some estimates, more than 40 percent of attacks were perpetrated by people with diagnosed mental illness.
    - Many youth are at greater risk of mental health conditions due to their living conditions, stigma, discrimination or exclusion, or lack of access to quality support and services making them more prone to radicalization.
- **Increasing extreme ideological movement:** Extreme ideological movements are growing stronger in several European countries. Agitators have exploited the fear of religious minorities and refugees in order to undermine public confidence in government and turn them against the society.
- **Ease of execution:** Terrorist organisations have embraced this tactic to spread violence in countries where coordinated big attacks are difficult to execute due to stringent security.
- **Lax Gun Control regime**: favors lone wolfs in carrying out attacks with mass casualties.

Threats associated with Lone Wolf Attacks

- **Hard to detect and prevent:** The tools of intelligence agencies and law enforcement, including undercover sources and intercepted communications, are much less effective against an individual who is not communicating his plans and intentions to others.
- **Hurdles in Profiling:** Lone wolf terrorists comprise a wide variety of violent extremists. Among them are religious zealots, environmental, animal rights extremists etc. Even at the level of the ideological or religious background there is much variety. This makes it harder to counter them at ideological level.
- **Hard to distinguish from internet banter**: It is extremely difficult to differentiate between those extremists who intend to commit attacks and those who simply express radical beliefs or issue hollow threats.

Lone Wolf attacks in India

Challenges

- **Weakening position of the IS in Iraq and Syria** reduces chances of a traditional regrouping of the terrorist organisation. Hence, the groups might prefer 'lone wolf' attacks by their members, sympathisers, would-be militants and foreign fighters in India.
- **Possibility of Pakistan using it as a tool to advance its state-sponsored terrorism against India.**
    - By sponsoring a widespread circulation of extremist literature and propaganda across India, both online and offline, Pakistan may resort to influencing the 'lone wolves' to carry out terror attacks in India.
- **High potential damage** of lone wolf attacks due to presence of densely populated areas and illegal networks for obtaining firearms in India.
- **Spread of fake news and misinformation**: Fake news propagated through social media sites crystalise biased narratives and seem to legitimise and reinforce the desire to seek violence against the "other".

Steps taken to prevent it

- **Strict laws** have made gaining access to explosives, light weapons and other ammunitions in India immensely difficult.
- **India's cultural pluralism and democratic values:** has helped counter extremist ideologies.
- India has the third largest Muslim population in the world, only a minuscule fragment of the population has expressed interest in joining or sympathises with the IS.
- **Strong security apparatus** along with the reforms in the counter-terrorism structure in the aftermath of 2008 Mumbai terror attacks is a major deterrent to the 'lone wolves.'

- **Providing a template to violence-prone misfits who might otherwise not have acted**: People who might not have the means, opportunity, or even desire to actually join a terrorist organization might nevertheless come to see lone-wolf attacks as an appealing way to express their rage and avenge perceived injustice.

Way forward

- **A multi-pronged approach towards radicalisation** must be adopted by the government and the security agencies, anchored in human intelligence, strong ties with communities and community leaders and deradicalisation programmes.
- **Monitoring social media** can help officials spot potential attackers without previous connections to other terrorists.
  - Governments should continue to press companies such as Facebook and Twitter to tighten restrictions on accounts linked to terror groups, monitoring users more regularly and suspending their accounts when necessary.
- **Try to make lone-wolf attacks less lethal** by limiting access to explosive materials, semiautomatic weapons etc.
- **Focus on gathering intelligence, arresting suspected cell leaders, and destroying terrorist command centers** involved in radicalization activities.
- **Proactive measures** such as training and equipping the local police, contingency plans by the intelligence and counter-terrorism structures, and a robust national counter-terrorism doctrine addressing the different nuances of terrorism are strategically important to subdue any attempts of lone wolf terrorism.
- **Big data analytics** can be used to discern the level of radicalisation of potential recruits, their networks and sources of information, funding and leadership in order to help unravel the roots of radicalisation.

4.3. FINANCIAL ACTION TASK FORCE

Why in news?

Pakistan is likely to remain on the grey list of the **Financial Action Task Force (FATF)** for failing to comply with its deadline to prosecute and penalise terrorist financing in the country.

About Financial Action Task Force (FATF)

- The FATF is the **global money laundering and terrorist financing watchdog**. The inter-governmental body sets international standards that aim to prevent these illegal activities and the harm they cause to society.
- It currently comprises **37 member countries (including India)** and 2 regional organizations-European Commission and Gulf Co-operation Council.
- It was established in July 1989 by a **Group of Seven (G-7) Summit** in Paris, initially to examine and develop measures to combat money laundering.
  - It later expanded its mandate to incorporate efforts to combat terrorist financing and to counter the financing of proliferation of weapons of mass destruction, in addition to money laundering.
- FATF established a series of **Special Recommendations to combat terrorism** which outlined measures to deprive terrorists and terrorist organisations of access to funding and the financial system.

Terrorist financing

- Terrorist financing is the process by which terrorists fund their operations in order to perform terrorist acts.
- Terrorist require funds for activities such as:
  - Supporting day-to-day operations of terrorist cell
  - Buying weapons or other destructive instruments
  - Financing terrorist training camps
  - Publishing terrorist propaganda
  - Recruitment of new terrorists
  - Payments for political support or sanctuary within rogue areas or states
- Sources of terrorist financing vary from **legitimate funds** such as donations and money derived from charities to **unlawful funds** derived from activities such as drug trafficking, money laundering, smuggling, and illegal arms trading.

Role of FATF in combating terrorist financing

- **Setting global standards to combat terrorist financing**: FATF ensures all its members have implemented measures to cut off terrorism-related financial flows, in accordance with the **FATF Recommendations**. All members are required to:
  - Criminalise the financing of individual terrorists and terrorist organisations.
  - Freeze terrorist assets without delay and implement ongoing prohibitions.
- **Evaluating countries' ability to prevent, detect, investigate and prosecute the financing of terrorism**: FATF issues two lists namely-

- **Black list** (officially known as High-Risk Jurisdictions subject to a Call for Action)
  - ✓ It sets out the countries that are considered **deficient in their anti-money laundering and counter-financing of terrorism** (AML/CFT) regulatory regimes.
  - ✓ These blacklisted countries are subjected to economic sanctions and other prohibitive measures by FATF member states and other international organizations.
  - ✓ The current FATF blacklist includes two countries: **North Korea and Iran**.
- **Grey list** (officially referred to as Jurisdictions Under Increased Monitoring)
  - ✓ Countries on the FATF grey list represent a much higher risk of money laundering and terrorism financing but have **formally committed to working with the FATF** to develop action plans that will address their AML/CFT deficiencies.
  - ✓ These countries are subjected **to increased monitoring** by the FATF.
  - ✓ While grey-list classification is not as negative as the blacklist, countries on the list may still face economic sanctions from institutions like the IMF and the World Bank and experience adverse effects on trade.

- **Assisting jurisdictions in implementing financial provisions of the United Nations Security Council resolutions on terrorism**: The FATF has developed a range of tools and guidance to help detect, disrupt, punish and prevent terrorist financing. FATF recommendations and other reports helps member countries to-
  - Understand and assess how terrorism is, or may be, financed
  - Enable financial institutions and non-financial business and professions to detect possible terrorist financing
  - Develop a framework to urgently freeze funds and assets of terrorists and their financiers
  - Prevent the abuse of non-profit organisations for terrorist financing purposes
  - Establish control over the cross-border transportation of cash and bearer negotiable instruments
  - Ensure proper information sharing between competent authorities
  - Create a financial intelligence unit to collect and analyse information on terrorist financing.

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5. ENVIRONMENT

5.1. CLIMATE CHANGE AND ITS IMPACT ON INDIAN REGION

Why in news?

Ministry of Earth Sciences' (MoES) released a report titled '**Assessment of Climate Change over the Indian Region'**.

More on news

- It is a **first ever attempt** to document and assess climate change in different parts of India.
- The report **highlights the observed and projected changes** in various climatic dimensions over the Indian region, their impacts and various policy actions to deal with the regional climate change.

Following are the observed and projected changes in various climatic dimensions over the Indian region:

Dimension	Observations and Projections

Rise in Temperature	• Average temperature has **risen by around 0.7°C during 1901–2018**.
	• **Causes:** The surface air temperature changes over India are attributed **mostly by greenhouse gases** and partially offset by other anthropogenic forcing **including aerosols and land use land cover change.**
	• **As compared to 1976-2005 period**, by the end of 21st century, it is projected that:
	  ○ **temperature may rise by approximately 4.4°C.**
	  ○ **frequency of summer heat waves over India may be 3 to 4 times higher**

Change in Rainfall pattern	• **Summer monsoon rainfall** has **declined by 6%**, over India between 1951-2015 especially in the densely populated Indo-Gangetic plains and the Western Ghats. • The **frequency of localized heavy rain occurrences as well as dry spells has significantly increased**. • **Causes:** Global-scale anthropogenic forcing such as GHGs as well as regional-scale forcing such as aerosols and land-use/ land-cover changes i.e. increasing urbanisation. • **Projections:** Frequency of extreme precipitation events may increase; Lengthening of the monsoon season.
Droughts	• The **area affected by drought has also increased by 1.3% per decade** during 1951–2016. Areas over **central India, southwest coast, southern peninsula and north-eastern India have experienced more than 2 droughts per decade**, on average, during this period • **Causes:** Overall **decrease of seasonal summer monsoon rainfall** during the last 6–7 decades. • **Projections:** Increase in the frequency (>2 events per decade), intensity and area under drought conditions.
Floods	• Flooding events have **increased since 1950, in part due to enhanced occurrence of localized, short-duration intense rainfall events.** • **Projections: Higher rates of glacier and snowmelt** in a warming world would enhance stream flow and **compound flood risk over the Himalayan river basins.**
Sea-level rise in the North Indian Ocean	• It occurred at a rate of **1.06–1.75 mm per year during 1874–2004** and has **accelerated to 3.3 mm per year between 1993 and 2017**, which is comparable to the current rate of global mean sea-level rise. ○ **Also,** Sea surface temperature **(SST) of the tropical Indian Ocean has risen by 1°C on average** during 1951–2015, markedly higher than the global average SST warming of 0.7°C. • **Causes:** Continental ice melt and thermal expansion of ocean water in response to global warming • **Projection: Sea level in the NIO may rise by 300 mm** relative to the average over 1986–2005
Tropical Cyclonic Storms	• The **frequency of very severe cyclonic storms (VSCSs) during the post-monsoon season has increased** significantly (+1 event per decade) during the last two decades • **Causes:** The intensity of tropical cyclones (TC) is closely linked to ocean SST and heat content, with regional differences in their relationships. • Climate models **project a rise in the intensity of tropical cyclones** in the NIO basin during 21st century.
Himalayan Cryosphere	• The Hindukush Himalayas (HKH) (largest area of permanent ice cover outside the North and South Poles, also known as the 'Third Pole') experienced **a declining trend in snowfall and also retreat of glaciers in recent decades**. However, parts of the **high-elevation Karakoram Himalayas have, in contrast, experienced increased wintertime precipitation** in association with enhanced amplitude variations of synoptic western disturbances ○ Climate of the **HKH is characterised by tropical/subtropical climatic conditions from the foothill region of the mountains to permanent ice and snow-covered peaks at higher altitudes**

	• **Projection:** Significant decrease of snowfall in several regions of the HKH, high-elevation locations (> 4000 m) in the Karakoram Himalayas are projected to experience an increase in annual precipitation during the 21st century.

Implications of increasing regional climate change

- **Food Security:** Rising temperatures, heat extremes, floods, droughts and rainfall variability **can disrupt rainfed agricultural food production and adversely impact crop yield.**
  - For instance, as per a NITI Aayog document, of the total pulses, oilseeds and cotton produced in the country, **80% pulses, 73% oilseeds and 68% cotton come from rain-fed agriculture.**
- **Water Security:**
  - Droughts and floods **are detrimental to surface and groundwater recharge.**
  - Rising sea level leads to **intrusion of saltwater in the coastal aquifers** contaminating the groundwater. E.g. in Gujarat, Tamil Nadu, and Lakshadweep etc.
  - Declining trend in snowfall and retreat of glaciers in HKH region may **impact the water supply in the major rivers and streams** including the Indus, Ganges, and Brahmaputra.
- **Energy demand:** Rising temperatures are likely to **increase energy demand for space cooling**, further adding to the global warming by increasing GHG emissions.
- **Human Health:**
  - Higher temperatures, extreme weather events, and higher climate variability could **elevate risk of heat strokes, cardiovascular and neurological diseases, stress-related disorders and spread of vector-borne diseases** such as malaria and dengue fever.
  - Decrease in the availability or affordability of food and potable water may lead to **reduced nutritional intake, particularly among economically weaker sections.**
- **Biodiversity:** Many species may face increasing threats on account of these climatic changes. Species specially adapted to narrow environmental conditions are likely to be affected the most.
  - For example, the Indian Ocean is home to 30% of the world's coral reefs and 13% of global wild-catch fisheries. This marine ecosystem, including corals and phytoplankton, and fisheries are being impacted by a rise in heat waves in the ocean, known as **marine heat waves.**
- **Economy:**
  - According to the International Labour Organization**,** the **loss in productivity** by 2030 **because of heat stress** could be the equivalent of India losing 34 million full-time jobs.
  - According to Ministry of Environment Forest and Climate Change, **Desertification, land degradation and drought cost India about 2.5% of gross domestic product** in 2014-15.
  - **Health-care costs and productivity losses from pollution are as much as 8.5% of GDP**, according to the World Bank.
  - **Sea-level rise increases the vulnerability of some large cities** located at coastline.
- **Social issues**
  - **Large scale migration** induced due to climatic disasters such as droughts, cyclones and floods.
  - Repeated crop failures add to the burden of already distressed farmers who then resort to suicides.

Recommended policy suggestions by the report

- **Make vulnerability assessment central to long-term planning** for developing adaptation and mitigation strategies. Inclusion of detailed, regional-scale climate change risk assessments would help develop region and sector-specific mitigation and adaptation measures to reduce vulnerability to climate change.
- **Greater emphasis on widening observational networks**, sustained monitoring, expanding research on regional changes in climate and their impacts. For instance, networks of tide gauges with GPS along the Indian coastline would help monitor local changes in sea level.
- **Afforestation efforts:** It helps to mitigate climate change through carbon sequestration. It also enhance resilience to flash floods and landslides by improving soil retention, improve resilience to droughts by increasing percolation of surface water into the soil, improve resilience of coastal infrastructure and habitation by reducing coastline erosion due to storm surges and sea-level rise, reduce vulnerability to extreme heat by reducing ambient temperatures, and support native wildlife and biodiversity.
- **Equity and social justice** for building climate resilience since the most vulnerable people such as the poor, the disabled, outdoor labourers and farmers will bear the brunt of climate change impacts.

5.2. GENDER, CLIMATE & SECURITY

Why in news?

Recently, a new report titled **Gender, Climate & Security: Sustaining Inclusive Peace on the Frontlines of Climate Change** was published by the UN Environment Programme (UNEP), UN Women, the UN Development Programme (UNDP), and the UN Department of Political and Peacebuilding Affairs (UNDPPA).

Key Highlights

Link between climate change and security

- **Outcomes of climate change threatening security**: Rising temperatures, extended droughts, heavier rains and harsher storms are resulting in exacerbated loss of livelihoods, food insecurity, competition over scarce resources, migration and displacement and political and economic instability.
  - **Example**- In some parts of the Sahel region, rapid reduction in the availability of fertile land and reliable water sources, have spurred competition over resources in the area, undermined trust and created new patterns of migration. This has led to increase in **localized violent conflict** between different livelihood groups.
- **Climate change disrupting peace in sensitive regions**: Climate change shocks can overwhelm existing systems and resources, eroding trust and social cohesion and potentially resulting in intensification of conflict.
- **Violence affecting communities' capability to deal with climate change**: Violent conflict and political instability leave communities poorer, less resilient, and ill-equipped to cope with the effects of climate change.
  - **For example**, due to the ongoing humanitarian crisis in the Lake Chad Basin, communities are less able to adapt to changing conditions in terms of the availability and distribution of key natural resources and increased frequency of natural hazards.

UN Department of Political and Peacebuilding Affairs (DPPA)

- The DPPA was **established in 2019** following the reform of the United Nations peace and security infrastructure, which brought together the former Department of Political Affairs (DPA) and the United Nations Peacebuilding Support Office.
- It plays a central role in United Nations efforts to prevent deadly conflict and build sustainable peace around the world.
- The Department provides support to the **UN Secretary-General and his envoys in their peace initiatives**, as well as to **UN political missions** around the world.

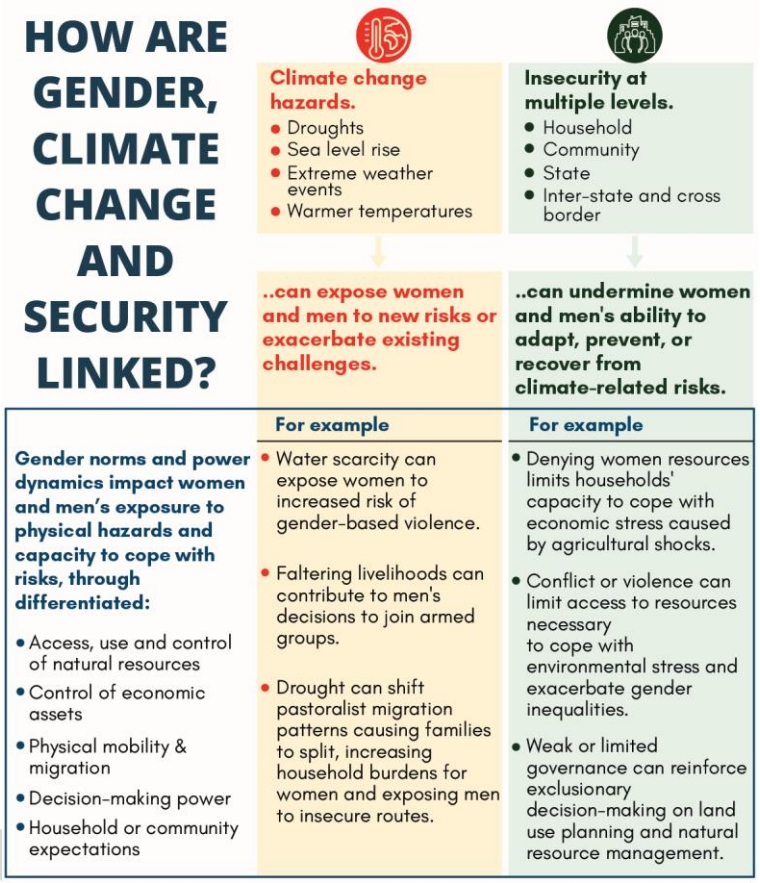
Link between Gender and climate-related security risks

- **Climate-related security risks impact men and women differently:** Pre-existing inequalities, gender-related roles and expectations, and unequal access to resources can deepen inequality and leave some groups disproportionately vulnerable.
- **Out migration of men due to scarce access to land or water:** Men who migrate away may face physical insecurity, such as passing through areas with higher levels of violence, or entering into unsafe working conditions.
- **Traditional and expanding responsibilities due to climate change can expose women to new security risks**: including sexual and gender-based violence, additional barriers to education and heightened burden of household responsibilities, such as collecting water or fuelwood in degraded environments.
  - **For example**- In urban Pakistan, women have experienced domestic violence for failing to manage households with depleting water supplies due to climate change.
- **New opportunities for involving women in peacebuilding, conflict prevention and climate change adaptation**: Incorporating women's unique knowledge of natural resources – as providers of food, water, and energy – into climate change adaptation can strengthen the design and implementation of adaptation plans.
  - **For example**-In Sudan, women in some communities have become actively involved in facilitating dialogue over natural resource disputes.

Recommendations for Integrated Action

- **Integrate complementary policy agendas:** Concerted and coordinated action needs to be undertaken to integrate largely siloed policy frameworks on sustaining peace, climate change, and women, peace and security. Policies to address climate-related security risks should systematically include gender dimensions.
  - **Some UN policy frameworks and global agendas** which present opportunities for integrated action are-
    - ✓ United Nations Framework Convention on Climate Change (UNFCCC)- Kyoto Protocol (1997), Paris agreement (2015), Lima Work Programme on Gender (2014)
    - ✓ 2030 Agenda For Sustainable Development

- **Scale up integrated programming:** Successful interventions that empower women and marginalized groups to address climate-related security risks show that integrated programme design can achieve promising results for gender equality, climate action and peacebuilding goals. Such initiatives should be significantly scaled up through cross-sectoral partnerships.
- **Increase targeted financing:** The majority of financing for conflict prevention, peacebuilding and sustainable development remains "gender blind".
    - Dedicated investments in women's empowerment can be increased in sectors related to natural resources, including agriculture and rural development, energy access, and water and sanitation.
- **Expand the evidence base:** Deeper analysis of the gender dimensions of climate-related security risks is needed, including-
    - how gender shapes the experiences of women and men across contexts exposed to different climate risks (drought vs. sea level rise) and security threats (armed conflict vs. criminality);
    - how gender dynamics shape climate and conflict-related displacement and migration; and
    - the peacebuilding impacts of engaging women in natural resource governance and climate-resilient livelihoods.


HOW ARE GENDER, CLIMATE CHANGE AND SECURITY LINKED?
Climate change hazards.
Droughts
Sea level rise
Extreme weather events
Warmer temperatures
Insecurity at multiple levels.
Household
Community
State
Inter-state and cross border
..can expose women and men to new risks or exacerbate existing challenges.
..can undermine women and men's ability to adapt, prevent, or recover from climate-related risks.
Gender norms and power dynamics impact women and men's exposure to physical hazards and capacity to cope with risks, through differentiated:
Access, use and control of natural resources
Control of economic assets
Physical mobility & migration
Decision-making power
Household or community expectations
For example
Water scarcity can expose women to increased risk of gender-based violence.
Faltering livelihoods can contribute to men's decisions to join armed groups.
Drought can shift pastoralist migration patterns causing families to split, increasing household burdens for women and exposing men to insecure routes.
For example
Denying women resources limits households' capacity to cope with economic stress caused by agricultural shocks.
Conflict or violence can limit access to resources necessary to cope with environmental stress and exacerbate gender inequalities.
Weak or limited governance can reinforce exclusionary decision-making on land use planning and natural resource management.

5.3. LOSS OF ICE COVER IN THE ARCTIC SEA

Why in news?

Recently, the **National Centre of Polar and Ocean Research (NCPOR)** found the largest decline in the Arctic Sea ice in the last 41 years due to global warming in July, 2019.

More about the study

- NCPOR noted that between 1979 and 2018, the sea ice has been declining at a rate of -4.7 per cent per decade, while its rate was found to be **-13 per cent in July 2019**.
    - Sea ice is **frozen seawater that floats on the ocean surface.** It forms in both the Arctic and the Antarctic in each hemisphere's winter; it retreats in the summer, but does not completely disappear.
- If this trend continues, there would be **no ice left in the Arctic sea by 2050** since the volume of ice loss during summers might surpass the volume of ice formation during winters.
- Rapid decline in Arctic sea ice cover is **linked with growing carbon emissions and subsequent global warming.**

National Centre for Polar and Ocean Research (NCPOR)

- It was established as an **autonomous Research and Development Institution** of the **Ministry of Earth Sciences** in 1998 to carry out research activities in the polar and Southern Ocean realms.
- It is also responsible for maintenance of the Indian stations in Antarctica (Maitri & Bharati) and Arctic (Himadri).

Impacts of Declining Arctic Sea ice cover

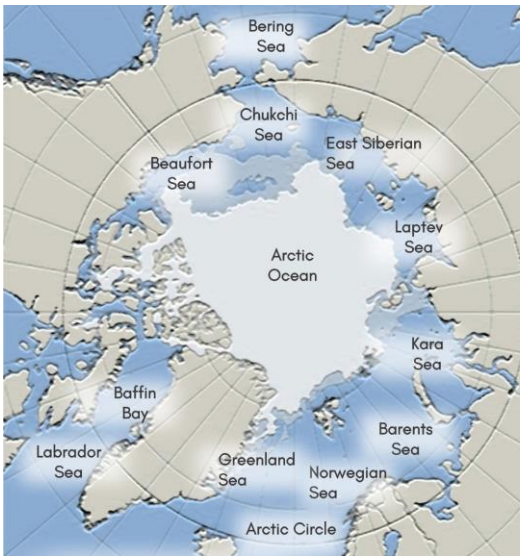
- **Influence on regional weather:** The decline of sea ice may have impact on evaporation rates, air humidity, cloud cover, and rainfall of neighboring regions.

- In recent times, **high temperatures** have been recorded **in the Siberian region,** causing a prolonged heatwave, which have been attributed to absence of sea ice among other factors.

- **Loss of habitat:** for seals and polar bears. This also increases encounters between polar bears and humans.
- **Coastal erosion:** As sea ice retreats from coastlines, wind-driven waves combined with thawing permafrost may lead to more rapid coastal erosion.
- **Impact on global climate**: In the Arctic, ocean circulation is driven by the sinking of dense, salty water. Fresh meltwater coming primarily from the Greenland Ice Sheet could interfere with ocean circulation at high latitudes, slowing it down. Any changes in ocean circulations can have unpredictable global impacts even in lower latitudes such as extreme weather events, droughts etc.
- **Positive feedback cycle (the ice-albedo feedback)**: Sea ice has higher albedo than ocean water. Once sea ice begins to melt, a self-reinforcing cycle often begins whereby as more ice melts and exposes more dark water, the water absorbs more sunlight and the sun-warmed water then melts more ice.

Arctic Ocean

- The Arctic Ocean is Earth's northernmost body of water and the world's **smallest ocean.**
- It is bordered by Greenland, Canada, Norway, Alaska, and Russia and is almost completely covered with ice for the majority of the year.
- It is surrounded by marginal seas such as the Chukchi, East Siberian, Laptev, Kara, Barents, White, Greenland, and Beaufort.



Conclusion

Arctic sea ice is part of a **complex global system**, and as a result it affects communities at all latitudes. The loss of Arctic sea ice can be slowed largely by reducing carbon dioxide and other greenhouse gas emissions and by conserving other natural resources that have global impacts.

5.4. NATURAL BARRIERS TO NATURAL DISASTERS

Why in news?

West Bengal launched a project to plant 5 crore mangrove trees in cyclone-hit Sundarbans.

More on news

- Powerful **cyclone Amphan that struck India and Bangladesh** last month passed through the vast mangrove forests of the Sundarban delta. It resulted into destruction of 1,600 square kilometre of the 4,200 square km mangrove forest.
- Hence the present plantation drive aims to finish the project in a month.

Mangroves as natural barrier to Cyclones

- There is growing evidence that **mangroves and other natural barriers are critical components in the overall resilience of coastal areas** to threats posed by tsunamis, cyclones, and other natural disasters.
- Mangrove wetlands, which are found along sheltered tropical and subtropical shores and estuaries, are **particularly valuable in minimizing damage to property and loss of human life** by acting as a barrier against tropical storms, such as typhoons, cyclones, hurricanes, and tsunamis.
  - The **Sunderbans with its thick mangrove forest acts like a shield**. The mangroves do not just help to reduce the wind speed drastically when the storm moves through the delta but even help to break the waves and the storm surge triggered.
  - The **location and curvature of the Sunderban delta** is such that in most cases the **cyclones are diverted** towards Bangladesh after they hit the mangroves. For instance, cyclone Bulbul in 2019 headed towards Bangladesh after it hit the delta.
  - In Odisha also **the mangrove forests in Bhitarkanika National Park (Odisha) withstood high-velocity winds and protected the area when cyclone Amphan barrelled through the Odisha coast.** In the 1999 super cyclone, the area was also saved as the mangroves bore the onslaught of gusty wind.

Natural Barriers to Disasters (Bio-Shields)

- There are indirect and direct linkages between ecosystems and disasters. Ecosystem-based approaches can be effective tools in reducing disaster and climate risks and one of the few approaches to **reduce all three components of the risk equation:**
  - buffering and mitigating hazard impacts
  - reducing vulnerability by providing ecosystem services to reduce vulnerability
  - reducing exposure when natural infrastructure is established in highly exposed areas.
- However, **not all hazards can be effectively mitigated by ecosystems**, which is for instance the case for earthquakes, and that the magnitude of the hazard can be a limiting factor, such as in the case of the 2004 Indian Ocean Tsunami and the 2011 Tohoku earthquake and tsunami in Japan where coastal forests provided only limited protection.

Hazard mitigation functions of different ecosystems	
Ecosystem	**Hazard Mitigation**
Mountain forests, vegetation on hillsides	• Vegetation cover and root structures protect against erosion and increase slope stability by binding soil together, preventing landslides. • Forests protect against rockfall and stabilise snow, reducing the risk of avalanches. • Catchment forests, especially primary forests, reduce risk of floods by increasing infiltration of rainfall, and delaying peak floodwater flows. • Forests in watersheds are important for water recharge and purification, drought mitigation and safeguarding drinking water supply.
Wetlands, floodplains	• Wetlands and floodplains control floods in coastal areas, inland river basins, and mountain areas subject to glacial melt. • Peatlands, wet grasslands and other wetlands store water and release it slowly, reducing the speed and volume of runoff • Coastal wetlands, tidal flats, deltas and estuaries reduce the height and speed of storm surges and tidal waves. • Marshes, lakes and floodplains release wet season flows slowly during drought periods.
Coastal (Mangroves, saltmarshes, coral reefs, barrier islands, sand dunes)	• Coastal ecosystems protect against hurricanes, storm surges, flooding and other coastal hazards – a combined protection from coral reefs, seagrass beds, and sand dunes/coastal wetlands/coastal forests are particularly effective. • Coastal wetlands buffer against saltwater intrusion and adapt to slow sea-level rise by trapping sediment and organic matter. • Non-porous natural barriers, such as sand dunes (with associated plant communities) and barrier islands, dissipate wave energy and act as barriers against waves, currents, storm surges and tsunamis, depending on the magnitude.
Drylands	• Natural vegetation management and restoration in drylands contributes to control desertification, as trees, grasses and shrubs conserve soil and retain moisture. • Shelterbelts, greenbelts and other types of living fences act as barriers against wind erosion and sand storms. • Maintaining vegetation cover in dryland areas, and agricultural practices, such as use of shadow crops, nutrient enriching plants and vegetation litter, increases resilience to drought. • Prescribed burning and creation of physical firebreaks in dry landscapes reduces fuel loads and the risk of unwanted large-scale fires.

About Sundarbans

- The Sundarbans mangrove forest, one of the largest such forests in the world (140,000 ha), lies on the delta of the Ganges, Brahmaputra and Meghna rivers on the Bay of Bengal. It is adjacent to the border of India's **Sundarbans World Heritage site** inscribed in 1987.
- The site is intersected by a **complex network of tidal waterways, mudflats and small islands of salt-tolerant mangrove forests,** and presents an excellent example of ongoing ecological processes.
- The area is known for its wide range of fauna, including 260 bird species, the Bengal tiger and other threatened species such as the estuarine crocodile and the Indian python.

Mangrove Cover: According to the India State of Forest Report, 2019

- There has been a **net increase of 54 sq km in the mangrove cover** of the country as compared to 2017 assessment.
- The **mangrove cover in the country is 4,975 sq km**, which is 0.15% of the country's total geographical area. West Bengal has 42.45% of India's mangrove cover, followed by Gujarat (23.66%) and A&N Islands (12.39%).

- About 40% of world's Mangrove Cover is found in South East Asia and South Asia. India has about 3% of the total Mangrove cover in South Asia.
- **Threats to Mangrove cover:** Climate change, habitat degradation, human disturbance, fuel-wood collection and lack of any high elevation spaces for the mangrove species to regenerate and thrive have been highlighted by World Wildlife Fund as the biggest reasons for reduced mangrove cover.

5.5. URBAN FLOODING

Why in news?

Recently, **Ministry of Earth Sciences (MoES) in coordination with Municipal Corporation of Greater Mumbai** developed an Integrated Flood Warning System for Mumbai called '**IFLOWS-Mumbai'**.

More on the news

- IFLOWS-Mumbai is a state of art Integrated Flood Warning system for Mumbai to enhance the resilience of the city of Mumbai by making it possible to have an **estimate of the flood inundation three days in advance**, along with immediate weather updates.
- It will provide **early warning** for flooding specially during **high rainfall events and cyclones** which would include alerts on **rainfall information, tide levels, storm surge for low-lying areas** anticipated to be affected.
- It is built on a modular structure comprised of seven modules, namely **Data Assimilation, Flood, Inundation, Vulnerability, Risk, Dissemination Module and GIS based Decision Support System**.
- The system incorporates-
  - **weather models** from National Centre for medium Range Weather Forecasting (NCMRWF), India Meteorological Department (IMD),
  - **field data** from the rain gauge network stations setup by Indian Institute of Tropical Meteorology (IITM), Municipal Corporation of Greater Mumbai (MCGM) and IMD,
  - **thematic layers on land use, infrastructure** etc provided by MCGM.
- **Mumbai is the second city** after Chennai to get this system. Similar systems are being developed for Bengaluru and Kolkata.
- These systems are significant since many Indian cities like Mumbai, Chennai, Delhi, Kolkata etc. have been experiencing **urban flooding with increased periodicity**.

About Urban Flooding

- Urban flooding is the inundation of property in a built environment, particularly in densely populated urban areas, caused by intense rainfall (on impermeable surfaces) which **overwhelms the capacity of drainage systems**.
- It is significantly different from rural flooding as urbanisation leads to developed catchments which **increases the flood peaks from 1.8 to 8 times** and **flood volumes by up to 6 times**. Consequently, flooding occurs very quickly due to faster flow times, sometimes in a matter of minutes.
- Urban flooding has wide ranging **impacts**:
  - Damage to vital urban infrastructure causing disruptions in transport and power
  - Loss of life and damage to property
  - Risk of epidemics due to exposure to waterborne and vector borne infections
  - Deterioration of water quality
  - Economic losses due to disruption in industrial activity, supply chains etc
  - Displacement of population in low lying areas
  - Accidents and fires due to short circuit

Factors Contributing to Urban Flooding

Meteorological Factors	Hydrological Factors	Human Factors
• **Heavy Rainfall** • **Cyclonic storms** • **Small-scale storms** • **Cloudburst**	• Synchronization of runoffs from various parts of watershed • High tide impeding drainage	• **Land use changes** (e.g. surface sealing due to urbanization, deforestation) increase runoff and sedimentation • **Encroachment** of the flood plain and thereby obstructing flows • Inefficiency or non-maintenance of **flood management infrastructure**

• **Bursting of glacial lakes**	• Presence of impervious/ impermeable cover • High Soil moisture levels • Low Natural surface infiltration rate • Absence of over bank flow, channel network	• **Climate change** affects magnitude and frequency of precipitation and floods, and also causes **extreme weather events** • Changing Urban micro-climate due to **urban heat island effect** may enforce precipitation events • **Sudden release of water from dams** located upstream of cities/towns • **Indiscriminate disposal of solid waste** leading to blocked drainage systems.

Way forward

- **Integrated approach** should be adopted for **sustainable urban planning** by empowering and educating Urban Local Bodies in decision making and planning of flood mitigation infrastructure.
- Focus on increasing the resilience of communities and adaptive capacity of our infrastructure is needed.
- Urban design and planning should be **water sensitive** and take into consideration the topography, types of surfaces (pervious or impervious), natural drainage etc.
- **Vulnerability analyses and risk assessments** should form part and parcel of city master plans.
- Disabling encroachment in sensitive zones through **robust anti-encroachment laws and by providing adequate affordable housing** can help reduce number of persons vulnerable to changing climate.

NDMA guidelines on urban flooding

It designates **Ministry of Urban Development as the Nodal Ministry** for Urban Flooding. Among key provisions of the Guideline are-

Early Warning System and Communication

- Create a **National Hydro-meteorological Network**- for providing early warning in all urban centres.
- Developing **local networks for real-time rainfall data collection** with a '**Local Network Cell'** in the IMD headquarters.
- **Sub divide Cities/ towns on the basis of watersheds** and develop a protocol for forecasting rainfall for urban areas on the basis of watershed.

Design and Management of Urban Drainage System

- A watershed based and ward-based **inventory of the existing storm water drainage system** to be prepared.
- **Pre-monsoon desilting of all major drains** to be completed by March 31 each year.
- Every building in an urban area must have **rainwater harvesting** as an integral component.
- **Concept of Rain Gardens** to be incorporated in planning for public parks.
- Integrated Planning and interactions between Water and Solid Waste Management.

Urban Flood Disaster Risk Management

- Risk assessment will be carried out with a **multi-hazard concept** leading to **fool proof land use planning**.
- The **research should focus on three key areas**: risk identification, risk pooling and risk transfer. The risk should focus on both property and people.
- **Identification of potential damage areas**, according to the physical characteristics of the area such as land use, topography, drainage area, outfall system and the capacity of the existing stormwater drainage system.
- **National Database for Mapping Attributes**- The database required for mapping different ward/community level attributes will be made accessible to all ULBs and concerned departments/ agencies/ stakeholders
- **National Urban Information System (NUIS)** to cover infrastructure facilities at community level integrated with socio-economic data.

Techno-Legal Regime

- Stormwater drainage concerns will be made a part of all EIA norms
- Growth of urban sprawls be made a part of urban flood management.

Capacity Development, Awareness Generation and Documentation

- Urban Flood Education, Institutional & Community Capacity Development, enhanced Role of Civil Society, Awareness on Insurance etc.
- Role of Public Representatives, Role of Media is also discussed.

5.6. ONE SUN ONE WORLD ONE GRID

Why in news?

The Ministry of New and Renewable Energy (MNRE) has recently issued a request for proposal (RfP) for developing a long-term vision, implementation plan, road map, and institutional framework for its **One Sun One World One Grid (OSOWOG) program.**

About OSOWOG

- The idea for OSOWOG was for the first time pitched by Indian Prime Minister in **2018** during the first General Assembly of International Solar Alliance (ISA).
- Through the OSOWOG initiative India plans build a **global ecosystem of interconnected renewable energy resources** that are seamlessly shared for mutual benefits and global sustainability.
- The vision behind the OSOWOG is "**The Sun Never Sets**" and is a constant at some geographical location, globally, at any given point of time. Hence solar energy can be utilized through **interconnected transmission.** The global grid plan may also leverage the ISA.
- The interconnected grid is envisioned with **India at the fulcrum** and two broad zones viz.
  - **far East** which would include countries like Myanmar, Vietnam, Thailand, Lao, Cambodia etc. and
  - **far West** which would cover the Middle East and the **African Region.**
- The initiative has been taken up under **Technical assistance program of the World Bank** and is planned across **3 phases**:
  - **Phase I: Interconnection of Middle East-South Asia-South East Asia (MESASEA)**-
    - ✓ Indian Grid interconnection with the MESASEA grids to share solar and other renewable energy resources for meeting electricity needs including peak demand.
    - ✓ For this, an assessment of the renewable energy potential of all countries in these regions will be made, and a study will be carried out to find a suitable way as to how these countries can share their renewable energy resources to meet their electricity demand and to rationalize their tariffs.
  - **Phase II: Interconnection of Solar and other Renewable Energy resources-rich regions-**
    - ✓ MESASEA grid getting interconnected with **the African power pools** to share solar and other renewable energy power of the countries located in solar and renewable energy-rich areas.
  - **Phase III: Global interconnection**- To achieve the One Sun One World One Grid vision.

International Solar Alliance (ISA)

- The ISA is a **treaty-based inter-governmental organisation** for solar-resource-rich countries (which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn) to address their special energy needs.
- The ISA was announced by Indian Prime Minister of India and then President of France in 2015, at the 21st session of **United Nations Climate Change Conference of the Parties (COP-21) in Paris, France.**
- It is headquartered in **Gurgaon, India**.
- It has **67 member countries** which have signed and ratified the ISA Framework Agreement.

Significance

- **Creation of regional and international interconnected green grids**: There are notable benefits associated with an interconnected grid-
  - It can enable **sharing of renewable energy** across international borders which would help all the participating entities in **attracting investments** in renewable energy sources as well as **utilizing skills, technology and finances**.
  - Expanding power systems across borders will allow developers and market participants to take advantage of **economies of scale** on both the supply and demand sides, through **reduced project costs, higher efficiencies and increased asset utilization**.
  - Countries can benefit from **comparative natural resource advantages** since excess power generated from renewable sources can be exported to other countries.
  - Interconnection will help in electrification of areas that had previously lacked electricity and help achieve **Sustainable Development Goal 7** - Ensure access to affordable, reliable, sustainable and modern energy.
- **Environmental benefits**: Increased international cooperation in the field of renewable energy will help countries move towards cleaner sources of energy and fulfill their commitments made under **Paris climate agreement**.
  - Coordinated efforts can also help utilize solar energy in remote wastelands with high power potential (such as deserts and hilly regions).
- **As a foreign policy tool**: Through OSOWOG, India can raise its national profile in the field of international renewable energy governance in the backdrop of the US withdrawal from the Paris climate deal.
  - National renewable energy management centers in India will have prospects of growing as regional and global management centers.

- **Countering China's One Belt One Road (OBOR) initiative**: China has constantly made attempts to co-opt countries into OBOR to invest in infrastructure projects, which include railways, ports and power grids, across Asia, Africa and Europe.

Challenges

- **Threat of cyber-attack**: ICT based interconnected grid management and distribution could be prone to cyber attack. This might also deter countries to participate as electricity grids form a part of critical national infrastructure.
- **Unpredictable supply**: due to intermittent generation, and daily and seasonal variability of renewable energy.
- **Technological challenges**: associated with interdependent and long-distance power transmission projects such as energy loss, incompatible transmission networks, increased risk of blackout spillover etc.
- **Regional political implications:** Strategic denial of service in times of conflict can be used as a tool to extract political concessions.
- **Regulatory hurdles**: It can be difficult to coordinate among multiple jurisdictions, regional planning, and agreements on how to share investment costs.

Way forward

- Providing **cyber security support** for energy utilities and operations to participating nations, establish standards to protect the grid, and develop **contingency plans** to protect against cyber attacks.
- Developing **governing institutions and regional market frameworks** for coordination through political negotiations.
- Encouraging fair trade, domestic reforms, transparency, and effective management of interconnected systems by setting **standards for digitized cross-border pricing and trading exchanges**.

5.7. EXTENDED PRODUCERS RESPONSIBILITY

Why in news?

Recently, government released draft of 'uniform framework for Extended Producers Responsibility' under Plastic Waste Management Rules (PWMR) 2016.

About draft Extended Producers Responsibility (EPR) framework

- EPR is strategy used to **promote reuse, recycling, and eco-friendly disposal of waste** by assigning the **responsibility of disposal of the waste to the manufacturer/producer of the goods**.
- EPR framework under PWMR 2016 has proposed three models:
  - **Plastic credit model**
    - ✓ In this **producer is not required to recycle** their own packaging, **but to ensure that an equivalent amount of packaging waste has been recovered and recycled** to meet their obligation.
    - ✓ Producers and processors/ exporters **may exchange plastic credits** for a financial transaction at a price and other terms as negotiated between them.
  - **Producer Responsibility Organisations (PROs)**
    - ✓ Under this an **organisation will manage the waste** on behalf of producers.
    - ✓ **Municipal bodies can also register** as PRO or waste collector.
    - ✓ There will be a **National PRO Advisory Committee** to govern plastic waste management in the country.
  - **Fee-based mechanism**
    - ✓ Under this the **producers will contribute to the EPR corpus fund** at the central level, each producer contributing **based on generation of plastic waste vis-a-vis efforts required.**
    - ✓ This may be an **escrow account managed by Special Purpose Vehicle**, where private and other stakeholders can become members.
- It also has **provisions to impose penalties** on producers if they fail to meet their targeted collection. This money shall be used for creating infrastructure for plastic waste management.
- It recommends a **graded approach for achieving the targets**, starting with 30% in the first year and moving up to 90% in five years.
- Includes provisions for **Information, Education and Communication** (IEC) to achieve an effective waste segregation, collection, transportation and recycling.

- A **single national registry** will be created to enlist all stakeholders to **improve monitoring and help bring transparency** in plastic waste management system.
- The **monitoring** of the entire mechanism of the EPR will be the **responsibility of the Central Pollution Control Board (CPCB).**

Benefits of EPR framework

- Due to **closed loop approach** under EPR, waste generated is used to **produce another product.** This significantly leads to **lower cost of production for the new product** by using waste.
- Also, it helps to **reduce the hazardous environmental impact** of the waste generated. A 2017 report by CPCB pegs the amount of plastic waste generated in India at 25,940 tonnes per day.
- Since EPR has **shifted the burden of waste disposal to these product manufacturers**, it has driven the adoption of innovative production techniques tec.
- EPR policies will be instrumental in **ensuring 3R principle (Reduce-Reuse-Recycle)** hence facilitating a circular economy, extending life cycle of product.

Concerns about EPR framework

- Current framework of EPR put **high regulatory cost and fines** on companies for non-adherence to guidelines.
- There is a **lack of formalized reverse logistics system,** hence setting up a collection network could be extremely complex and expensive.
- The **informal sector manages around 90% of waste management** streams and upgrading them into the formal sector while ensuring their adherence to compliances will be challenging.
- Even after implementation of EPR framework, **social awareness and responsibility are key concerns** in successfully managing waste.
- **Segregation of waste at source will be challenging** due to lack of technological methods and involvement of unorganised and unaware manpower.

Plastic Waste Management Rules 2016 (amended in 2018)

- **Defines minimum thickness** of plastic carry bags i.e. 50 microns. This would increase the cost and the tendency to provide free carry bags would come down.
- **Responsibility of local bodies**: Rural areas are brought under the rules since plastic has reached rural areas as well. The gram sabhas have been given responsibility of implementation.
- **Extended Producer Responsibility**: Producers and brand owners have been made responsible for collecting waste generated from their products.
- **Producers are to keep a record** of their vendors to whom they have supplied raw materials for manufacturing. This is to curb manufacturing of these products in unorganised sector.
- **Responsibility of waste generator**: All institutional generators of plastic waste shall segregate and store their waste as per Solid Waste Management Rules, and handover segregated wastes to authorized waste disposal facilities.
- **Responsibility of street vendors and retailers**: Not to provide such carry bags or fine would be imposed. Only the registered shopkeepers on payment of a registration fee to local bodies would be allowed to give out plastic carry bags on charge.
- **Promote the use of plastic for road construction or energy** recovery.
- A **Central Registration System** for the registration of the producer/ importer/ owner.
- **Phasing out of Multi-layered Plastic (MLP)** that are "non-recyclable or non-energy recoverable or have no alternate use".

Way forward

- **Adoption of Circular Economy**, which aims to eliminate waste, not just from recycling processes, but throughout the lifecycles of products and packaging it maximize value and eliminate waste by improving the design of materials, products and business models.
- **Provide incentives to industry** by introducing tax rebates or other conditions to support its transition to phase out use of plastic.
- **Need to integrate the informal sector,** and increase **citizens' environmental awareness** and promote efficient coordination and communication between stakeholders involved.

5.8. COVID-19 BIOMEDICAL WASTE MANAGEMENT

Why in news?

Central Pollution Control Board (CPCB) has released revised guidelines for Biomedical waste management generated from COVID-19.

More on news

- Guidelines were issued under the title **'Guidelines for Handling, Treatment and Disposal of Waste Generated during Treatment/Diagnosis/ Quarantine of COVID-19 Patients.'**
- These were issued under, and in addition to **Biomedical Waste Management Rules, 2016.**
- These guidelines are **applicable to all stakeholders** including isolation wards, quarantine centres, sample collection centres, laboratories, Urban Local Bodies (ULBs) and **common biomedical waste treatment and disposal facilities (CBWTFs)**.

Key guidelines for COVID-19 Biomedical waste management

- **Collection and segregation of waste**
  - **Use dedicated trolleys and collection bins** in COVID-19 isolation wards and label "COVID-19 Waste" to be pasted on these items.
  - **Depute dedicated sanitation workers** separately for biomedical waste and general solid waste so that waste can be collected and transferred timely to temporary waste storage area.
- **Transportation and disposal of waste**
  - COVID-19 garbage is collected and taken in a **separate vehicle for proper disposal** as biomedical waste either to a CBWTF or a waste-to-energy plant, where it is then either **incinerated, autoclaved (sterilised for shredding and recycling) or burnt to produce energy**.
  - **Quantification and tracking** the movement of COVID-19 waste needed to be carried out by all quarantine centres though the CPCB's biomedical waste-tracking mobile application called **COVID19BWM**.
- **Role of nodal authorities - Designated trained nodal officers** for biomedical waste management in hospitals must be made **responsible for training waste handlers** about infection prevention measures.

Key features of Bio-medical Waste Management Rules 2016 (amended in 2018)

- **Pre-treatment of waste**: Waste generated in laboratories, microbiological waste, blood samples and blood bags to be pre-treated through disinfection or sterilisation on-site in the manner as prescribed by WHO.
- **Phasing out** of use of chlorinated plastic bags, gloves and blood bags.
- **Better segregation**: Bio-medical waste has been classified into **4 categories:** Untreated human anatomical waste, Animal anatomical waste, Soiled waste and Biotechnology waste.
- **Storage of waste**: Provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste.
- **Training and Immunisation**: Regular training to all its health care workers and immunising all health workers.
- **Transportation and handling**: Ensure that the bio-medical waste collected from the occupier is transported, handled, stored, treated and disposed without any adverse effect to the human health and the environment.
- **Procedure of Disposal**: The biomedical waste must be **segregated in coloured bags (Yellow, Red, White and Blue)** according to the category of the waste. It can be stored up till 48hrs after which it is either needed to be treated at insitu site or collected by the worker from CBMWTF.
- **Record maintenance and monitoring**: Maintain and update bio-medical waste management register and record for operation of incineration, hydro or autoclaving etc, also review and monitor the activities related to bio-medical waste management through committee.
- **Establish GPS and Bar-coding facility at** Common biomedical waste treatment facility**.**

Challenges with COVID-19 biomedical waste

- **Health risk:** This waste has created new biomedical waste crisis and **posing a health risk to sanitation workers and garbage collectors. E.g.** Over 40 sanitation workers have tested positive for COVID-19 and 15 have lost their lives in Delhi.
- **Lack of segregation:** Municipalities pick up COVID-19 biomedical waste from houses, but it **often has other household waste mixed in it**. This decreases the efficiency of the incinerators at waste treatment plants as it results in greater emissions and unburnt ash.
- **Large volume of waste generated:** Before the COVID-19 outbreak, there was 500 grams of biomedical waste per bed daily. Now, it is between 2.5kg to 4kg per bed and a large COVID-19 facility can generate 1800 to 2200 kg of biomedical waste per day.
- **Overburdened disposal Capacity:** PPE are being used everywhere, from hotels to hospitals, railway stations to airports, crematoriums to burial grounds so, the **disposal mechanisms available in the cities are not equipped to deal with this huge volume.**
- **Investment in incinerators** is also a problem, as this infection (COVID-19) is episodic, the machines may not be useful once cases start decreasing.

Way forward

- Stringent actions and **penalties shall be imposed** in case of non-adherence of guidelines.
- Deploying **private agencies for the jobs** and monitoring by respective pollution control boards so as to address shortage of human resources and funds.
- Information Education Communication (**IEC**) **campaigns create awareness among public on waste segregation, safety measures,** and steps to ensure safety of frontline functionaries shall be taken on priority.

5.9. SEABED 2030 PROJECT

Why in News?

Recently, researchers under Seabed 2030 project had finished mapping nearly one-fifth of the world's ocean floor.

About Seabed 2030 Project

- It is a collaborative project **between the Nippon Foundation of Japan and the General Bathymetric Chart of the Oceans (GEBCO).**
- It aims to bring together all available bathymetric data to **produce the definitive map of the world ocean floor by 2030** and make it available to all.
  - Bathymetry is the **measurement of the shape and depth of the ocean floor**.
- It was launched at **United Nations Ocean Conference in 2017**.
- It is **aligned with the UN's Sustainable Development Goal (SDG) 14** to conserve and sustainably use the oceans, seas and marine resources.
- Seabed 2030 project comprises four **Regional Centers and a Global Center** (in UK).

About GEBCO

- GEBCO is an **international group of geoscientists and hydrographers,** working on the development of a range of bathymetric data sets and data products.
- GEBCO operates under the joint auspices of the **Intergovernmental Oceanographic Commission** (IOC) (of UNESCO) and the **International Hydrographic Organization** (IHO).
- GEBCO is the only intergovernmental organisation with a mandate to map the entire ocean floor.

Benefits of Sea floor mapping

- Shape of the seabed is critical to **understanding ocean circulation patterns** which affect climate and weather patterns, tides, sediment transport and resource exploration (oil, gas and minerals).
- **Strengthen understanding of marine ecosystems and marine life** for the benefit of our current and future food supply, as **three billion people rely on fish** as a source of protein.
- **Understanding of climate change**, as floor features including canyons and underwater volcanoes influence vertical mixing of ocean water, ocean currents, sea-level rise.
- **Disaster management** by understanding tsunami wave propagation, earthquakes, underwater geo-hazards etc. E.g. previously mapped seafloor helped Japan to reconstruct forces behind 2011 Tohoku earthquake.
- **Routing of submarine cables,** between land-based stations to carry telecommunication signals across stretches of ocean, is highly dependent on detailed knowledge of bathymetry.
- Empower the **world to make policy decisions**, use the ocean sustainability and undertake scientific research based on detailed bathymetric information.

5.10. INDIA'S FIRST LICHEN PARK

Why in news?

Uttarakhand forest department has developed the country's first lichen park in Munsiyari, Uttarakhand.

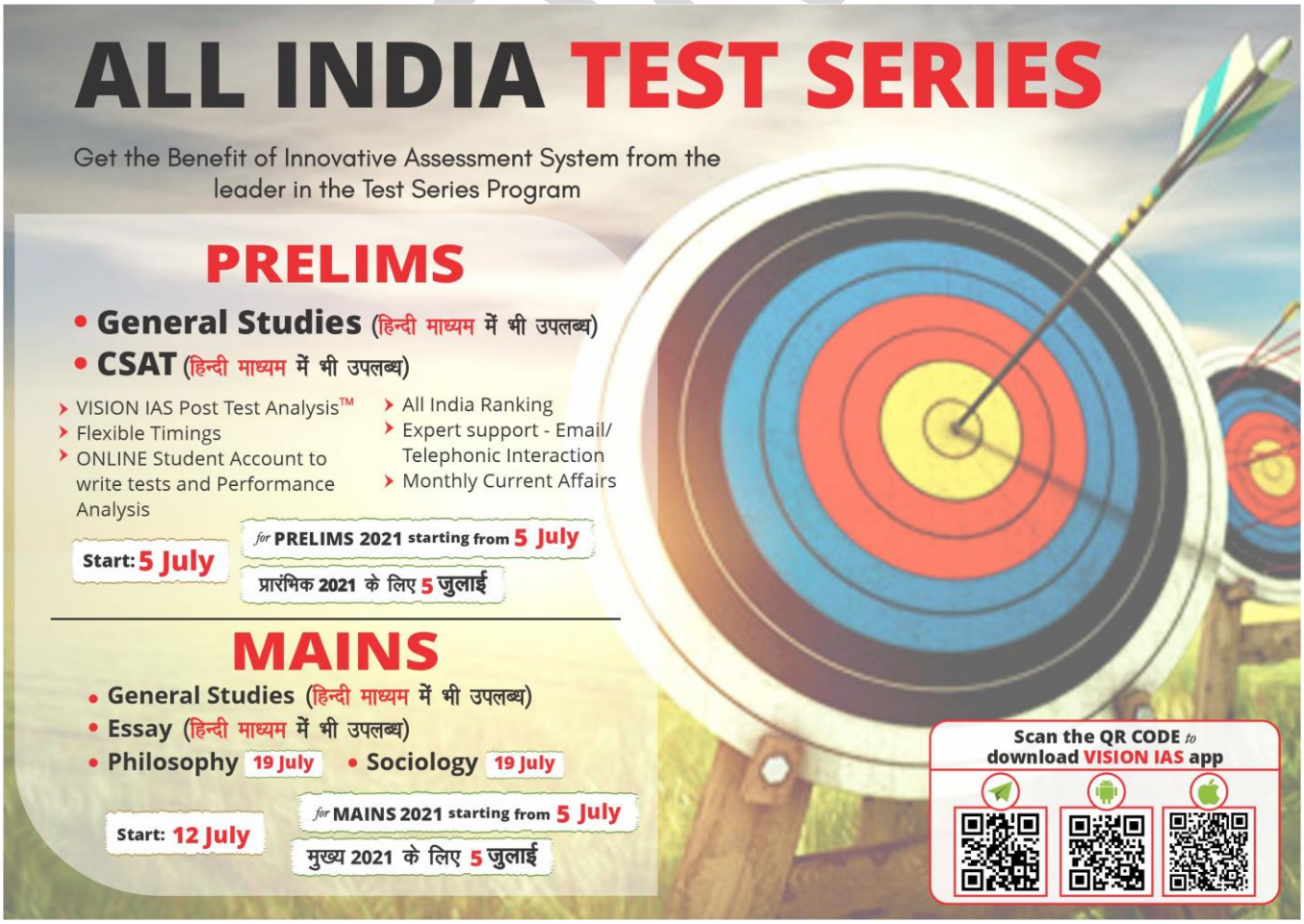
More on news

- The park has been developed with an aim to **conserve, protect, and cultivate lichens** and to create awareness among locals regarding their importance.
- More than 20,000 **species** of lichens are found in the world and **India has around 2,714** of them. Uttarakhand is home to more than 600 species of lichens.

About Lichens

- Lichen is a **composite organism that emerges from algae or cyanobacteria** living among the filaments of the **fungi**, living in a **symbiotic relationship**.

- Whereas algae normally grow only in aquatic or extremely moist environments, lichens can potentially be found **on almost any surface (especially rocks**) or as **epiphytes** (meaning that they grow on other plants).
- In local parlance, these are called **"jhula" or "pathar ke phool"**
- Lichens are slow growing and can live for centuries.
- **Some major uses of lichens:**
  - Lichens have the ability to **separate minerals** by eroding rocks.
  - Lichen is also a **key ingredient** in many cuisines.
  - They are used to prepare an **indigenous perfume** in Kannauj.
  - They are also used in **sunscreen creams**, dyes, and some medicines.
  - Some lichens are very **tolerant to pollutants such as nitrogen and sulphur compounds**, while others are very sensitive to the presence of one or both of these chemicals. Hence, the species act **as bioindicators.**
    - ✓ Also, it absorbs and stores radioactive substances, such as cesium and strontium compounds, without apparent harm.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6. SOCIAL ISSUES

6.1. URBAN POOR

Why in news?

The disproportionate impact of COVID-19 pandemic on urban informal workers including their migration from cities to their native places brought into focus the issues of urban poor.

Introduction

- India's urban population has grown rapidly over the last century from 25 million in 1901 to 377 million in 2011 which constitute 31.2% of the total population in the country.
- But the **urban areas have failed to meet the demands** of increasing population pressure resulting in large gaps in provisioning of basic amenities of housing, drinking water, sewerage, transportation etc.

Poverty Line in India (per-capita per month at 2011-12 prices)- *All data for 2011-12*

Committee on Poverty Estimation	Rural Poverty Line	Urban Poverty Line	Rural Poverty Level	Urban Poverty Level	All India Poverty Level
Tendulkar committee	Rs. 816	Rs. 1000	25.4%	13.7%	21.9%
Rangarajan Committee	Rs. 972	Rs. 1407	30.9%	26.4%	29.5%

Issues of urban poverty

Urban poverty being multi-dimensional, various vulnerabilities are faced by the poor in cities and towns. As identified by Tenth Five Year Plan, there are several types of vulnerabilities broadly classified as

- **Housing Vulnerability:** Majority of urban poor generally live in **low quality unhygienic areas** such as slums. They have **no ownership rights and entitlements**. As occupants construct on the empty land, the **civic body does not provide them basic amenities**- therefore they have no access to individual water connection, toilets, electricity, and roads. Also, poor live in unhealthy and insanitary living conditions.
  - According to Census 2011, 17.7% of urban population comprising 65 million people lives in slums.
- **Economic Vulnerability: Irregular employment** with **low wages** makes them more vulnerable. This restricts availability of formal credit from banks, they have **no access to formal safety net programmes**, and productive assets.
- **Social Vulnerability:** The income inequality creates **divergence between lower strata of society i.e. poor and middle class**. It increases social differences in education and skill development programmes.
- **Personal Vulnerability:** At personal level, poor are more **vulnerable for getting social justice** in their day-to-day work. The poor are victims of all types of injustice and violence. Particularly, low caste people and minority, especially women, children, the elderly, disabled and destitute have no access to social justice.

Challenges for Urban Poor due to COVID-19 Pandemic

- **Increased risk:** There are several **factors that put the urban poor**, **especially those living in slums, at high risk** for contracting infectious diseases such as COVID-19. These **risks are linked to**: Overcrowded living conditions; crowded transport services, specific aspects of working in the informal sector (often in crowded places, no social protection to fall back on, etc.) etc.
- **Job Losses**: In the current coronavirus crisis and the lockdown, most migrants in cities find themselves suddenly jobless as **factories close, supply chains shut down** and services freeze.
- **Limited alternatives:** A major cause of concern is the **state of migrant workers**, **especially seasonal migrants** — those who move between rural and urban India based on agricultural seasons. Since the lockdown, many of these workers have returned home, but the **rural economy is not capable of absorbing such a large number of workers, even with the MGNREGA.**
- **Public transfers and other assistance:** Ensuring that food items and essential supplies, such as medicines, reach the vulnerable sections has been a challenge in this period.
  - The government has responded to the crisis by announcing several **social protection schemes**, including direct benefit transfers for certain sections of the population and free LPG refills, grains, and pulses for the poor**.** But large sections of the urban population, including **urban informal workers**, remain out of scope of government benefits for the want of documents.

- **Lack of social protection for urban poor:** Nearly 70% of social protection beneficiaries are in rural India. But there's a growing urban economy and also fair amount of mobility between rural to urban India. The needs of a more mobile and urban India haven't been addressed.
    - For example, for COVID crisis, the government was able to quickly use pre-existing schemes like PM-KISAN, available only in rural India. There is **no urban equivalent of a MNREGA or PM-KISAN.**

Government Interventions for Urban Poor

The **Ministry of Housing and Urban Poverty Alleviation (MoHUPA) is the nodal agency** at the Centre responsible for development of urban poor. There are various schemes which address various vulnerabilities of the urban poor.

- **To address Housing Vulnerability:** The **Pradhan Mantri Awas Yojana (Urban) Programme** launched by the MoHUPA, in Mission mode envisions provision of **Housing for All by 2022**. The Mission seeks to address the housing requirement of urban poor including slum dwellers.
    - Also, recently Government approved a scheme named Developing of Affordable Rental Housing Complexes (ARHCs) for urban migrants/poor.
- **To address Economic Vulnerability:**
    - MoHUPA is implementing a **Centrally Sponsored Scheme Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM)** for reducing the poverty and vulnerability of urban poor households since 2013. The Mission **covers all the statutory towns**, to be decided by the State as per local need and capability.
    - Also, the **Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014** aims to protect the rights of urban street vendors and to regulate street vending activities. So far 33 States/UTs have notified the scheme. Meghalaya has its own Street Vendors Act.
- **To address Social Vulnerability:** Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Atal Pension Yojana (APY) seek to bring unorganised sector workers and poor across the country (including rural areas) under the safety net of insurance and pension.
    - More recently, **Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM)** - A pension scheme for unorganised workers was launched.

How to tackle the causes of urban poverty?

COVID-19 has forced us to look at **imbalanced growth planning** of cities and an **impoverished urban population.** In such a scenario, following suggestions could be implemented to tackle the persisting challenges-

- **Reform the Urban Governance:** Rebuild urban governance model on the following pillars: Convergence and accountability; urban populace specific schemes; wider public participation; and use of the latest technologies.
- **Build a credible Database** of the urban poor and migrants, along with **mapping their skills** that is maintained centrally at the district level. **The national migrant database**, announced by the National Disaster Management Authority is a step in this direction.
    - This data shall also **assist policy makers in developing tailor-made schemes for the urban populace**.
- **Decentralise urban growth:** Urban planning should be **decentralised by focusing on smaller cities** and towns. This will **lessen the burden of migrant population on megacities** and also **enhance the livability** within the city.
- **Strengthening of ULBs:**
    - **Change statutes** to allow municipal corporations to plan for the entire city, even if the development of certain areas fall under parastatals.
    - **Enhance municipal budgets**, and like South Africa and Brazil, **bring in 'equalisation grants'**, which municipal corporations can access for any development works that they wish to carry out.
- **Improving life in rural areas:** In order to control large-scale migrations from rural to urban areas, the current state of rural infrastructure (or lack thereof) must be addressed.
- **Address Health and social vulnerability: Learning from COVID pandemic** should be incorporated to focus on social determinants of healthcare by creating a robust, equitable and sustainable infrastructure that should be inclusive for all levels of society and ensure strong grassroots level partnership with communities.

Demand for National Urban Employment Guarantee Programme (UEGP)

Low budgetary provisions, poor human resource and less empowered Urban Local Bodies create challenges in assuring a better living environment and right to decent livelihood for every urban poor. Also, the COVID-19 led to widespread job losses in urban areas.

In this backdrop there is a demand for **National Urban Employment Guarantee Programme (UEGP).**

Benefits of UEGP

- A UEGP would **help to address the Underemployment and low wages** in the informal urban workforce by **mandating a statutory wage** like MGNREGA.
- It will also help to **retain the local workforce in smaller cities and towns** by providing work on demand thus **tackling the challenge of Migration** to large cities.
- There is also a **crisis of the quality of life** due to ecological stress and lack of adequate public services.
  A centrally funded programme covering the wages of different kinds of workers will allow the ULBs to fulfil tasks they are mandated to perform.
  - Further a **UEGP can generate a new set of 'green jobs'** that can strengthen the capacity of ULBs as well as promote sustainable urban development.
- Thus, a well-planned UEGP not only directly improves welfare by **raising incomes and creating assets**, there are many **positive spillover effects** too, such as:
  - It increases demand by **raising incomes directly**, and indirectly in the informal sector, by **improving the fallback position (alternatives) of workers**.
  - It provides a **better trained workforce** to the private sector by allowing educated young workers to acquire skills and improve their employability.
  - The work undertaken will **create assets** that improve the town's ecology and quality of public services.
  - It creates a **shared sense of public goods** in which every resident has a stake.
- Further, an employment guarantee programme also **strengthens the 'Right to Life' enshrined under Article 21**.

Challenges

- Rural guarantee scheme (MGNREGA) works on self-selection. All of the work under the scheme is of **unskilled manual nature**. Whether such a framework be implemented in the urban economy remain the moot question.
  - The basic premise of a healthy rural to urban economic transformation is to **transfer workers from low-skill and low-productivity professions to high-skill jobs.** It would be extremely difficult, if not impossible, for an urban employment guarantee scheme to ensure this.
- Given the fact that common land- which is where most of the rural guarantee works happen, is scarcer in cities than in villages, even an unskilled job guarantee might be difficult to implement in cities.

Progress on Urban employment guarantee programme

- **Madhya Pradesh** recently announced a 100-day urban job guarantee scheme, the **Yuva Swabhiman Yojana,** which provides urban youth with varying educational qualifications with a wide set of jobs.
- Since 2010, **Kerala** has been running **Ayyankali Urban Employment Guarantee Scheme** which guarantees 100 days of manual work wage employment to an urban household.
- **Odisha** recently launched an **Urban Wage Employment Initiative** for urban informal labour to carry out public works identified by ULBs.
- **Himachal Pradesh** has announced the **Mukhya Mantri Shahri Ajeevika Guarantee Yojana** which assures urban poor 120 days' work.
- **Jharkhand** has proposed **Mukhyamantri Shramik Yojana** under which urban workers will be able to demand a maximum 100 days of work.

6.2. DRUG ABUSE IN INDIA

Why in news?

- The **World Drug Report 2020 was released by The United Nations Office on Drugs and Crime (UNODC)** that has outlined the possible consequences of the COVID-19 pandemic on Illegal Drug Production, Supply and Consumption.
- In India, '**Nasha Mukt Bharat: Annual Action Plan (2020-21) for 272 Most Affected Districts' was e-launched** by Ministry of Social Justice and Empowerment **on the occasion of "International Day Against Drug Abuse and Illicit Trafficking" (June 26).**

What is Drug Abuse?

- Drug abuse or substance abuse r**efers to the use of certain chemicals for the purpose of creating pleasurable effects on the brain.**
- Substances of abuse include alcohol, opiates, cocaine, amphetamines, hallucinogens, prescription and over-the-counter drug abuse.

Drug abuse in India

- As per the UNODC 2020 report, India is also **among the countries with highest illicit cultivation and production of cannabis** from 2010 to 2017. In 2018, India topped with **largest seizure in South Asia**, amounting to 266.5 tons of cannabis herb.
- As per the report submitted by AIIMS in 2019,
  - **Alcohol is the most common psychoactive substance** used by Indians followed by Cannabis and Opioids.
- Within India, the **worst affected regions** are **North East India (especially Manipur) and North West India (especially Punjab)** followed by Mumbai and Delhi and now Haryana.

Causes of Drug abuse

- **Geographical location:**
  - India is the link country between the two major opium producing regions of the world, namely -the "**Golden Triangle" and the "Golden Crescent**".
  - Also, the **coastal states are susceptible** to maritime drug trafficking due to their exposure to trafficking routes across the Indian Ocean. **BIMSTEC region** due to its close proximity to China (leading country in the Pharma sector**) is very vulnerable** to the diversion and trafficking in Pharmaceutical Drugs.
- **Socio-economic factors:** Family history of addiction, unemployment, changing cultural values and dwindling supportive bonds, peer pressure, glorification by media.
- **Biological Factors:** Pre-existing psychiatric or personality disorder, or a medical disorder.
- **Psychological Factors:** Low self-esteem (Anomie), Poor stress management, Social rebelliousness, Childhood loss or trauma.
- **Weak law enforcement and regulatory controls:**
  - **Implementation of laws** such as Narcotic Drugs and Psychotropic Substances Act, 1985 by the states has been tardy.
  - **Developments in technology such as use of darknet for drug trafficking and** inadequately **trained staff.**
  - Many times, **licitly produced opium for Pharmaceutical sector** is **diverted** to illicit channels in India.

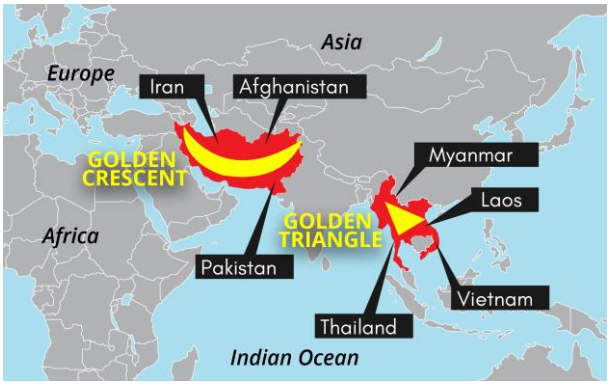
World Drug Report 2020

Key findings

- **Drug use has been on the rise** - both overall numbers and the proportion of the world's population.
  - over **35 million people suffer from drug use disorders**
  - over **5.5 lakh deaths** were attributed to drug use in 2017.
- **Transition to drug use disorders** is **more** prevalent among people **with a lower socioeconomic status.**
- Over the past two decades, **drug use increased far more rapidly in developing countries** than in developed countries.
  - Though it is more widespread in developed countries
  - Drug use is higher in urban areas than in rural areas, in both developed and developing countries.
- **Cannabis was the most used substance** worldwide in 2018, while **Opioids, remain the most harmful**.
- **Drug market is becoming more complex:** Plant-based substances such as cannabis, cocaine and heroin have been joined by hundreds of synthetic drugs, many not under international control. There has also been a rapid rise in the non-medical use of pharmaceutical drugs.

Impact of COVID-19 pandemic

- **Rise in drug use and drug trafficking:** Pandemic are likely to disproportionately affect the poorest, making them more vulnerable to drug use and also to drug trafficking and cultivation in order to earn money.
- **Increased risk for drug users among COVID-19 patients** as they now have compromised immune systems.
- **Alternative trafficking routes** due to restrictions to tackle the pandemic along the existing trafficking routes. For example, a recent uptick in opiate seizures in the Indian Ocean indicate that traffickers are increasingly looking to maritime routes.
- **Reduced access to drug disorder treatment** due to lockdown measures.



Impacts of Drug abuse

- **Threat to demographic dividend:** With most drug users being in the productive age group of 18–35 years, the loss in terms of human potential is incalculable.
- **Impact on Family:** The drug abuse problems may affect interpersonal relationships, instability in family, child abuse, economic insecurity, deprivation of schooling etc.

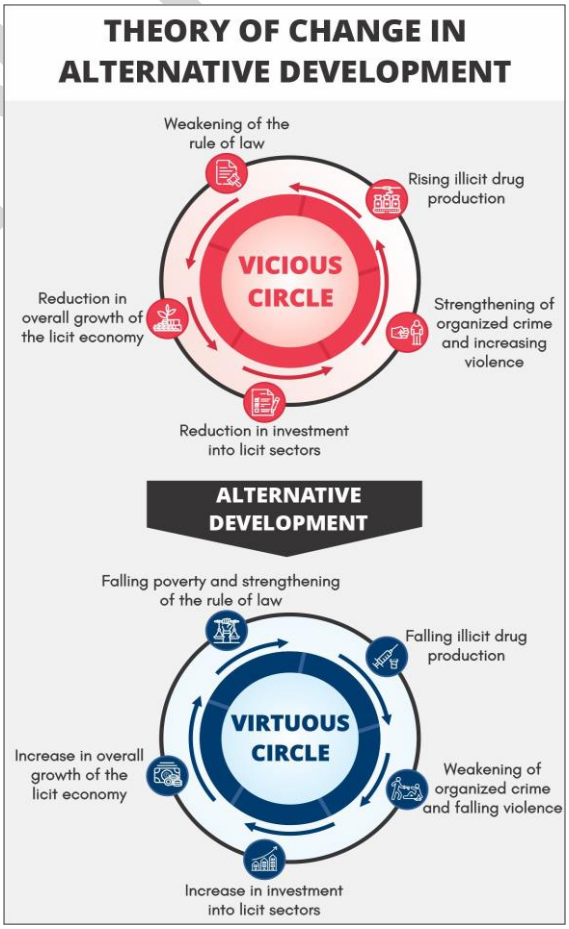
- **Strong link between injecting drug use (IDU) and the spread of HIV/AIDS**.
- Illegal nature of Drug trafficking makes it **prone to money-laundering and terror financing.**

Legal framework and steps taken by government to deal with drug menace

- **Article 47 of the Constitution** provides that 'the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health'.
- **Narcotic Drugs and Psychotropic Substances (NDPS) Act** in the year 1985 was enacted for the control and regulation of operations relating to narcotic drugs and psychotropic substances.
  - Under it The **Narcotics Control Bureau (NCB)** was constituted as the nodal drug law enforcement and intelligence agency of India responsible for fighting drug trafficking and the abuse of illegal substances.
- Ministry of Social Justice and Empowerment has prepared a **National Action Plan for Drug Demand Reduction (NAPDDR) for 2018-2025**.
  - The Plan aims at reduction of drug abuse through a multi-pronged strategy involving education, de-addiction and rehabilitation of affected individuals and their families.
- Recently Ministry **launched Nasha Mukt Bharat: Annual Action Plan (2020-21) for 272 Most Affected Districts**
  - It aims to: Reach out to Children and Youth for awareness about ill effect of drug use; Increase community participation and public cooperation; Supporting Government Hospitals for opening up De- addiction Centers in addition to existing Ministry Supported De-addiction Centers (IRCAs); and Conducting Training programme for participants.
- **International collaboration:**
  - **India is a signatory to the three UN Conventions** namely, Single Convention on Narcotic Drugs, 1961, Convention on Psychotropic Substances, 1971 and Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.
  - India launched BIMSTEC Conference on Combating Drug Trafficking, an important platform for the Partner Nations to share ideas and exchange best practices required to combat the drug menace in the region.

Way forward

- **Substance use prevention programmes** aimed at not just preventing substance use, but also ensuring that young people grow and stay healthy into adulthood, enabling them to realize their potential and become productive members of their community and society.
- **Conducive legal and policy environment**, training and capacity-building for health-care professionals, increasing the range and number of health-care providers who are allowed to prescribe and dispense controlled substances, and improving national supply management systems.
- **Stigma associated with drug use** and drug use disorders needs to be addressed by promoting the understanding that the initiation of drug use and the development of drug use disorders are influenced by factors that are often beyond the control of an individual.
- **Efficient coordination** between the drug supply control sector as well as the entities involved in drug demand reduction and harm reduction. **Enhancing collaboration** between Governments, United Nations entities, non-governmental organizations and academia.
- **Alternative development programmes** to address the current and potential ability of such farmers to manage risks and shocks (e.g., through income diversification, access to credit, savings and social protection) can help them move away from cultivating illicit crops.


THEORY OF CHANGE IN ALTERNATIVE DEVELOPMENT
Weakening of the rule of law
Rising illicit drug production
VICIOUS CIRCLE
Reduction in overall growth of the licit economy
Strengthening of organized crime and increasing violence
Reduction in investment into licit sectors
ALTERNATIVE DEVELOPMENT
Falling poverty and strengthening of the rule of law
Falling illicit drug production
VIRTUOUS CIRCLE
Increase in overall growth of the licit economy
Weakening of organized crime and falling violence
Increase in investment into licit sectors

6.3. GENDER DIMENSIONS OF THE COVID-19 PANDEMIC

Why in news?

COVID 19 Lockdown and social-distancing norms are likely to have an outsized impact on women.

Introduction

- The COVID-19 outbreak is impacting societies around the world in an unprecedented manner. However, not everyone, in every place, will be affected in the same way.
- Experiences from previous pandemics show that **women can be especially active actors for change, while they can also experience the effects of the crisis in different (and often more negative) ways.**
- Gender gaps in outcomes across endowments (health & education), agency and economic opportunity persist across countries. Impact of the COVID-19 pandemic will be amplified by those **pre-existing gender differences**.
- For the most part, the negative impacts can be expected to exacerbate (i.e. more individuals are affected) and deepen (i.e. the conditions/disadvantages of some individuals worsen).

Indian Women's vulnerability to COVID-19's impacts

- **Livelihood and Job Security:**
  - Oxfam India estimates the **economic loss** from women losing their jobs during the pandemic at about $216 billion, around 8% of the GDP. This clouds women's already poor economic outlook.
  - According to the ILO, **81% of Indian women work in the informal economy**. The informal sector is the **worst hit** by the coronavirus-imposed economic slowdown. The economic costs of the lockdown may be disproportionately borne by women in the end.
  - The need for social distancing has also temporarily **disrupted the functioning of self-help groups (SHGs)** that have been credited with improving women's well-being and empowerment.
  - **Feminisation of Poverty:** Many women are at risk of a permanent exit from the labour market. The end result will be the **feminization of income poverty**. Research from the World Bank suggests the pandemic will drive more than 12 million Indians into poverty. Women are **likely to be over-represented among the new poor**.
- **Social Inequities**
  - The impact of the virus is also **exacerbating India's deep-rooted social inequities**. An **unsafe environment** in many places and the **burden of domestic responsibilities** have **kept many women away from work**.
  - **Domestic Violence**: There has been a **more than two-fold rise in complaints of domestic violence** since the lockdown. The UNFPA warns that the pandemic could reduce world progress against gender-based violence by one-third.
  - **Migrant Women:** Many of the millions of migrant workers forced to flee cities for their rural homes with little notice were women. They have **safety concerns, with travel a risk** for many.
  - COVID-19 is shifting other **household dynamics**, too.
    - ✓ Domestic responsibilities that women bear, like cooking and cleaning, have escalated.
    - ✓ As women in Indian families **tend to eat last and the least**, financial strain and food shortages affect women's nutrition more than men. **Gender inequality in food security** will increase further following the loss of employment income.
- **Health**
  - Women may face specific constraints to access health services. According to government data, **55% of women report not using public health services**. **Out-of-pocket health expenditures are higher for women than for men in most developing countries.**
  - **Key services** such as maternal health, vaccination**,** sexual and reproductive health etc. **get interrupted** during public health emergencies, with negative consequences for women.
  - **Exposure to infection through work and care:** In India, women are at higher risk of contracting the virus because they are **overrepresented in the health-care sector** including as part of the **frontline health staff** (e.g. nurses, community health workers, birth attendants).
  - **Nutrition:** With the schools shut down, children's education is likely to suffer, along with an increase in malnourishment due to **disruption of mid- day meal**. The situation will **worsen for girls** as they are **more dependent on the mid-day meal programs** given the gendered nature of nutrition provision in households with limited resources.

- **Other aspects**
  - **The Additional Burden of Care:** One of the primary reasons that women leave the workforce or do not enter it in the first place is their unpaid caregiving responsibilities at home. Longstanding patriarchal social norms and cultural expectations have put the burden of caring for children, the elderly, and the household on Indian women.
  - **Social Distancing and digital education:** Girls' education will be disadvantaged - as only **29% of Internet users in India are female**, and there's a tendency for families with limited means to give preference to boys for schooling.

Policy response- Way Forward

The pandemic calls for greater consultations between the Ministry of Finance and the Women and Child Ministry to understand the differential impacts of COVID-19 on women and effective policy measures to address them. Some immediate steps that the government may adopt include:

- **Support to women facing domestic violence:** To help women file complain and seek help, the **National Commission for Women has launched an emergency WhatsApp number** in addition to **online complaint links** and emails. But governments must ensure adequate facilities and social distancing in shelter homes to ensure that women are able to file complaints against abusers fearlessly.
- **Extend MGNREGS to urban areas to help the urban poor:** Given the large-scale unemployment in urban areas and the hardships of the large number of migrant workers who are still in urban centres, MGNREGS should be extended to the urban areas to create jobs for the urban poor.
  - This will be **especially beneficial for a large number of women**, particularly domestic workers, who will fail to find employment as middle-class women stay at home and focus on unpaid care work.
- **Expand the ambit of MGNREGS to include handicrafts/folk arts:** Women play an important role in preserving handicrafts and art but have been completely left out of the relief package. Without government support, these crafts may be lost forever.
  - For instance, an artisan can teach her skill to children under MGNREGS. Including crafts and folk arts under MGNREGS will achieve the **twin objectives** of providing **income support to poor women** and **preserving Indian handicrafts and arts**.
- **Support to Women's SHGs:** To revive women's SHGs, the government should **support industries like the food processing sector and textiles and garments sector** (another sector where women account for the bulk of the workers) which are the **main buyers of SHG products**.
  - The announcement of expanding the limit of collateral-free lending to Women's Self Help Groups (SHGs) from Rs 10 lakhs to Rs 20 lakhs is another welcome step but the **main problem before SHGs is demand shortage.**
- **Special provisions for pregnant and nursing mothers:** Government's COVID-19 relief package had no special provisions for pregnant and lactating mothers who are enduring immense hardship under the lockdown.
  - Under the Maternity Benefit Programme, pregnant women and lactating mothers already receive a cash transfer of Rs 6000 in three instalments. The government could enhance this amount and provide special rations for pregnant and lactating women.
  - Some states like Jharkhand have started a **24/7 maternity/pregnancy helpline** to help access necessary medical assistance during the lockdown. This initiative should be implemented at the national level.

6.4. COVID-19 AND INDIA'S HEALTHCARE SECTOR

Why in news?

The COVID-19 crisis has highlighted glaring gaps in India's healthcare sector. At the same time, it offers a window to restructure and strengthen India's healthcare infrastructure.

More on news

- In the **Global Health Security Index**, which measures pandemic preparedness for countries based on their ability to handle the crisis, India ranked 57, lower than the US at 1, the UK at 2, Brazil at 22, and Italy at 31, highlighting India's vulnerability.

Major healthcare issues highlighted during COVID 19

- **Availability of basic infrastructure:**
  - India has **8.5 hospital beds per 10,000 citizens**, **one doctor for every 1,445 citizens** (WHO's prescribed norm is 1:1000) and **1.7 nurses per 1,000 people** (WHO's prescribed norm is 3:1000) which makes the situation more complicated.
  - Lack of adequate number of ventilators in hospitals is one of the major deficiencies suffered by patients with severe COVID-19 infection.
  - Availability of limited accredited diagnostic labs has further delayed testing and consequent understanding of disease progression.
- **Uneven distribution of healthcare workforce:** Most of the workforce practice in metropolitan or tier I or tier II cities, creating personnel deficiencies in small towns and villages.
- **Denial of healthcare:** Despite private hospitals accounting for about 62 percent of the total hospital beds as well as ICU beds and almost 56 percent of the ventilators, they are handling much lesser workload compared to public hospitals.
  - Private hospitals are reportedly **denying treatments** to the poor along with the cases of **overcharging** patients. This has been seen in Bihar, which has witnessed an almost complete withdrawal of the private health sector which has nearly twice the bed capacity of public sector.
- **Negative perception of medical career:** The stories of shortages of PPE leading to health workers getting infected, and health workers getting attacked by infuriated patients and relatives etc. may create a negative perception towards medical career in India in long run.
- **Gaps in urban health services and urban planning: T**he coronavirus epidemic has disproportionately affected the urban areas and has highlighted that many large urban conglomerations lack public health services, especially the sub-urban regions.
- **Dysfunctional state of Integrated Disease Surveillance Programme (ISDP):** It was **launched in 2004 to strengthen** decentralized laboratory-based IT enabled **disease surveillance system for epidemic prone diseases** to monitor disease trends and to detect and respond to outbreaks in early rising phase through trained Rapid Response Team (RRTs). But it continues to **struggle for manpower and resources and has failed to create a robust and decentralized data collection system** involving the district health system across states.
- **India's dependence on imports:** Over the last few decades India has emerged as the pharmaceutical hub of the world but it still **imports 68-69 percent of its Active Pharmaceutical Ingredients (APIs)** requirements from China.
- **Disbelief in alternative/traditional medicines for treatment:** Traditional medicines enterprises in India faces major issues today such as lack of research in AYUSH treatments, lack of precise standards for herbal formulations, many traditional health practitioners do not reveal exact recipes fearing intellectual theft. As a result, efficacy studies are either absent or poorly executed.
- **Lack of focus on preventive healthcare:** Of all healthcare spending, only 7% was spent on preventive healthcare, while more than 80% was spent on treatment and cure as of FY17.
- **Gaps in Care of Non-COVID-19 patients:** Extreme focus on containment of COVID-19 infection is likely to result in missed opportunities for timely diagnosis and treatment of other chronic diseases.

Opportunities and Way Forward

The response to the pandemic offers an opportunity to bring about structural changes in India's health policy:

Near and medium-term measures

- **Reducing the chances of hospital-acquired (nosocomial) infections**.
- **Need to ensure that COVID-19 does not cause denial of hospital services** for non-COVID patients.
- **Disruption of immunisation as well as other programmes should be addressed** at the earliest, to avoid preventable deaths in the future.
- **Ensuring supply of affordable medicines**: PMBJP (Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana) outlets can to be leveraged to ensure that essential medicines are available in adequate supply.
- **Use of technology**: For instance, Aarogya Setu app helps track coronavirus patients and the people they come in contact with.
- Union Ministry of Health is currently working with partners to establish an "**Interfaith Corona Coalition**" to engage religious communities in action against COVID-19.

Long-term measures

- **Upgradation of Public health services**
  - States with robust public health systems like Kerala have been far more successful in containing COVID-19, compared to richer states like Maharashtra and Gujarat, which have under-staffed public health systems.
  - Given this background, **now is the time to reinvent and rejuvenate public health services** across the country, for which health budgets must be substantially upgraded.
    - In fiscal year 2018, the value of public health expenditure by states and union territories together is estimated to be around 1.28 percent of the country's GDP.
- **Primary healthcare must be given importance**
  - All public health activities required for epidemic control – including testing, early detection of cases and various other preventive measures are being carried out by Primary Healthcare Centres.
  - However, the proportion of the Union health budget allocated for the National Health Mission, which is focussed on supporting primary and secondary health care, was reduced to 49% in 2020-'21 from 56% in 2018-'19. The **declining trend for support to PHC must be reversed**.
- **Improving robustness of Pharma Supply Chain**
  - India needs to diversify its sources of raw materials as well as destinations for products. This is a good time to end the dependency for bulk drugs or APIs on China by either emerging as a major manufacturer or facilitating partnerships with other countries.
- **Revamping urban health services**
  - There is an urgent need to launch a massive programme for revamping of urban health services focussed on primary healthcare, along with major upgradation of urban living conditions, especially in "non-notified" slums which must be recognised as integral to the city.
- **Innovative approaches**
  - Recognizing the increased need of hospitals across the country, several ingenious approaches are being explored, such as converting train coaches into isolation wards.
  - Making mobile hospitals which can be taken to locations throughout the country as per requirement.
- **Creation of Central Bed Bureau:** as recommended by SC in 1997 to ease the pressure for emergency beds. The Bureau should be equipped with wireless or other communication facilities to find out where an emergency patient can be accommodated.
- **Promoting preventive healthcare:** The huge and expanding network of Health and Wellness Centres (HWCs) within the Ayushmaan Bharat programme could become centres of health promotion as well as disease prevention. These could also act as for hub of community level monitoring.
- **Boosting private sector investment** in social sector infrastructure through public-private partnership mode. To enable this, government has **enhanced viability gap support to 30% for building hospitals in tier-2 and tier-3 cities from 20%.**

For more measures announced for health sector as a part of AtmaNirbhar Bharat Abhiyaan, refer to VisionIAS current affairs, May 2020 edition.

6.5. GLOBAL EDUCATION MONITORING REPORT 2020

Why in news?

UNESCO recently published Global Education Monitoring Report 2020 titled **Inclusion and education: All means all**.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

- It is a **specialized agency of UN** that seeks to build peace through international cooperation in Education, the Sciences and Culture.
- Its headquarters are located in **Paris, France**.
- It has 193 Members, including **India**, and 11 Associate Members.

Key Highlights

- An estimated **258 million children, adolescents and youth, or 17% of the global total**, are not in school.
- Globally, 1 in 12 primary school-age children, 1 in 6 lower secondary school-age adolescents and 1 in 3 upper secondary school-age youth are out of school.
- In low- and middle-income countries, adolescents from **the richest 20% households** are three times more likely to complete lower secondary school than those from the poorest families.
- In 10 low- and middle-income countries, **children with disabilities were 19% less likely to achieve minimum proficiency** in reading than those without disabilities.

Inclusive Education and its importance

- Inclusion is a process of systemic reform embodying changes and modifications in content, teaching methods, approaches, structures and strategies in education to overcome barriers to **provide students of all ages with an equitable and participatory learning experience and environment** that best corresponds to their requirements and preferences.

International declarations for inclusive Education

- **Sustainable Development Goal 4 (SDG 4)**: It aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- **2006 UN Convention on the Rights of Persons with Disabilities (CRPD):** It guaranteed the right to inclusive education.

- It focuses on the full and effective participation, accessibility, attendance and achievement of all students, especially those who are **excluded or at risk of being marginalized**.
- **Benefits associated with it:**
  - Improvement in academic achievement, social and emotional development, self-esteem and peer acceptance.
  - Including diverse students in mainstream classrooms and schools can **prevent stigma, stereotyping, discrimination and alienation**.
  - There are potential **efficiency savings from eliminating parallel structures** and using resources more effectively in a single, inclusive mainstream system.
  - **Promotes inclusive societies** and is a prerequisite for democracies based on fairness, justice and equity.
  - It provides a systematic framework for **identifying and dismantling barriers for vulnerable populations**.

Challenges

- **National laws do not reflect commitments made under international conventions:** Worldwide, general or inclusive education laws focus on people with disabilities in 79% of countries, linguistic minorities in 60%, gender equality in 50% and ethnic and indigenous groups in 49%.
- **Definition of inclusive education does not cover all learners**: While 68% of countries have a definition of inclusive education, only 57% of those definitions cover multiple marginalized groups.
- **Lack of desire to make education more inclusive**: One in three teachers in 43 mostly upper-middle- and high-income countries in 2018 reported that they did not adjust their teaching to students' cultural diversity. Teachers, teaching materials and learning environments often ignore the benefits of embracing diversity.
- **Prevalent segregation of students**: In the case of students with disabilities, laws in 25% of countries make provisions for education in separate settings, 10% for integration and 17% for inclusion, the remainder opting for combinations of segregation and mainstreaming.
- **Need of targeted financing**: Socio-economically disadvantaged schools and classrooms are more likely to have less qualified teachers.
- **Impact of COVID-19**-
  - **School closures** placed unprecedented challenges on governments, teachers, students and parents aiming to ensure learning continuity.
  - Only a minority of countries (mostly high-income countries) have the basic infrastructure to facilitate online approaches to teaching and learning.
  - **Learners with disabilities are at higher risk of exclusion** in distance learning. For instance,
    - ✓ many resources are not accessible for blind or deaf students.

India's efforts towards Inclusive Education

- **The Rights of Persons with Disabilities Act, 2016** mandates provision of accessible transport systems and universal design in public buildings and education facilities.
- **Right to Education Act, 2009** requires primary schools to be located no more than 1 km from a child's home.
- Following a **2014 Supreme Court ruling,** recognizing the status of transgender people, the University Grants Commission called on universities to include the category on all application forms.
- **The draft National Education Policy** states that universal design should be applied to schools' building design, sports facilities and general environments so all children benefit.
- In India, the share of teachers from scheduled castes, which constitute 16% of the country's population, increased from 9% in 2005 to 13% in 2013.
- **Steps taken by states-**
  - Tamil Nadu state set up a State Resource Centre for Inclusive Education.
  - Andhra Pradesh and Maharashtra states arranged transport for children and their parents, as they closed small schools.
  - Bihar state ensured representation of parents of learners with disabilities on school management committees.

- ✓ children with mild learning difficulties, such as attention deficit hyperactivity disorder, may struggle with independent work in front of a computer.
- About **40% of low- and lower-middle-income countries** have not supported learners at risk of exclusion during the COVID-19 pandemic, such as those living in remote areas, the poor, linguistic minorities and learners with disabilities.
- **Increasing social isolation** has also increased the risk of marginalized students disengaging further from education and leaving school early.
- Cancellation of exams in many countries, including India, has led to the concern that scoring based on **teachers' judgments may be affected by stereotypes** about particular types of students.

Recommendations

- **Widen the understanding of inclusive education** to include all learners, regardless of identity, background or ability.
- **Share expertise and resources** to sustain a transition to inclusion.
- **Targeted financing** to improve access to education for vulnerable sections.
- **Engage in meaningful consultation with communities and parents** to overcome discriminatory beliefs about gender, disability, ethnicity, race or religion**.**
- Ensure **cooperation across government departments, sectors and tiers.**
- Make space for non-government actors to challenge and fill gaps.
- Apply **universal design** where all children should learn from the same flexible, relevant and accessible curriculum, one that recognizes diversity and responds to various learners' needs.
- **Prepare, empower and motivate the education workforce** to prepare all teachers to teach all students.
- Collect data on and for inclusion with attention and respect and **avoid any labelling that stigmatizes**.

6.6. NATIONAL INSTITUTIONAL RANKING FRAMEWORK (NIRF)

Why in news?

Recently, "**India Rankings 2020**" under National Institutional Ranking Framework (NIRF) was released by the Ministry of Human Resource Development (MHRD).

About NIRF "India Rankings 2020"

- The NIRF was launched by the MHRD in 2015.
- This framework outlines a methodology to rank institutions across the country on a yearly basis under 10 categories- **Overall, University, Engineering, Management, Pharmacy, College, Medical, Law, Architecture** and **Dental** (newly added in 2020).
- **Objective of these rankings:**
  - To act as a **guide to students for selection of universities** based on a set of criteria.
  - Helps universities to improve their performance on various ranking parameters and identify gaps in research and areas of improvement.
  - Ranking of Institutions at national level instill a **competitive spirit amongst institutions** to perform better and secure higher rank in international ranking.
- NIRF is a **voluntary exercise** where only institutions that submit required data are ranked.
  - A total number of 3771 unique institutions offered themselves for ranking under "Overall", category-specific and / or domain-specific rankings for India Rankings 2020.

Related News

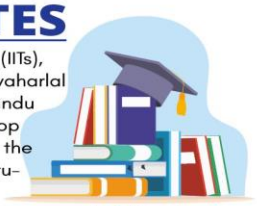
QS World University rankings

- Recently, QS World University rankings for the year 2021 were published.
- It ranks universities on **six metrics**:
  - Academic Reputation
  - Employer Reputation
  - Faculty/Student Ratio
  - Citations per faculty
  - International Faculty Ratio
  - International Student Ratio
- **IIT Bombay, Indian Institute of Science Bengaluru**, and IIT Delhi featured in the top 200 list.
- The top five Indian Institutes of Technology and the Indian Institute of Science have all dropped and the total number of Indian institutions in the top 1,000 global list has also fallen from 24 to 21.
- Reasons for drop in rankings include **low ratio of international faculty and students** and **poor faculty-student ratio**.

- **Parameters:** The ranking framework evaluates institutions on five broad generic groups of parameters-
  - **Teaching, Learning & Resources:** It includes sub-parameters such as Student Strength (including Doctoral Students), Faculty-student ratio, Financial Resources and their Utilisation etc.
  - **Research and Professional Practice:** It reflects quality and quantity of Publications, IPR and Patents Published and Granted by the institution etc.
  - **Graduation Outcomes:** of University Examinations and Number of Ph.D. Students Graduating.
  - **Outreach and Inclusivity:** It measures regional diversity, gender equity, accessibility for Physically Challenged Students, enrollment of economically and socially challenged students, perception ranking etc.
  - **Peer Perception:** among Academic Peers and Employers.

TOP INSTITUTES

Seven Indian Institutes of Technology (IITs), Indian Institutes of Science (IISc), Jawaharlal Nehru University (JNU) and Banaras Hindu University (BHU) were ranked as the top 10 educational institutions of 2020 in the overall category by the National Institutional Ranking Framework (NIRF)



RANK	INSTITUTION	STATE
1	IIT, Madras	Tamil Nadu
2	IISc	Karnataka
3	IIT, Delhi	Delhi
4	IIT, Bombay	Maharashtra
5	IIT, Kharagpur	West Bengal
6	IIT, Kanpur	Uttar Pradesh
7	IIT, Guwahati	Assam
8	JNU	Delhi
9	IIT, Roorkee	Uttarakhand
10	BHU	Uttar Pradesh

- The three top-ranked universities were IISc, JNU and BHU
- The three top-ranked colleges were Miranda House, Lady Shri Ram College for Women, & Hindu College; All part of the Delhi University

6.7. STATE FOOD SAFETY INDEX FOR 2019-20

Why in news?

Recently Food Safety and Standards Authority of India (FSSAI) released the results of **second State Food Safety Index on World Food Safety Day (June 7).**

More on news

- The Index is a dynamic quantitative and qualitative benchmarking model that **provides an objective framework for evaluating food safety across all States/UTs**. It is an incentive to create a sense of competition among states to improve food safety.
- This **index is based on performance of State/ UT on five significant parameters**, namely,
  - **Human Resources and Institutional Data (20% weightage**): To check availability of strong culture and ecosystem of enforcement.
  - **Compliance (30% weightage)**: Measures overall coverage of food businesses in licensing & registration.
  - **Food Testing – Infrastructure and Surveillance (20% weightage):** Measures availability of adequate testing infrastructure with trained manpower in the States/ UTs for testing food samples.
  - **Training & Capacity Building (10% weightage):** training and capacity building of regulatory staff and laboratory personnel.

About FSSAI

- It has been **established under Food Safety and Standards Act, 2006.**
- FSSAI has been created for laying down science-based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.
- The Act also **aims to establish a single reference point for all matters relating to food safety and standards**, by moving from multi- level, multi- departmental control to a single line of command.
- **Ministry of Health & Family Welfare, is the Administrative Ministry** for the implementation of FSSAI.

FSSAI Initiative

- **Eat Right Movement**: It is to improve public health in India and combat negative nutritional trends to fight lifestyle diseases
- **"Blissful Hygienic Offering to God" (BHOG):** To encourage Places of Worship (POW) to adopt and maintain food safety and hygiene as well as convey food safety messages through such places to the people to follow as responsible citizens.
- **Hygiene Rating Scheme** is an online, transparent scoring and rating process which aims to allow consumers to make informed choices about the places where they eat out & through these choices, encourage businesses to improve their hygiene standards & thus reduce the incidence of food-borne illness.
- **Heart Attack Rewind:** It is the first mass media campaign of its kind – will support FSSAI's global target of eliminating transfat in India by the year 2022.
- **FSSAI-CHIFSS:** FSSAI has joined hands with CHIFSS (CII-HUL Initiative on Food Safety Sciences) with the purpose of driving activities related to science-based food safety in the country, to strengthen protection of consumers and create an innovative environment for the industry.

- **Consumer Empowerment (20% weightage):** Measures the performance of States/ UTs in various consumer empowering initiatives of FSSAI.

- To ensure comparison among similar entities, index is divided in **3 categories**. State/UTs topped in 2019-20 Index
  - **Large state**: **Gujarat** followed by Tamil Nadu and Maharashtra.
  - **Small state**: **Goa** followed by Manipur and Meghalaya.
  - **UT: Chandigarh** followed by Delhi and Andaman Islands.

6.8. SWACHH BHARAT MISSION PHASE II

Why in news?

The operational guidelines for the second phase of the Swachh Bharat Mission (Grameen) (SBMG) Phase II were recently released by the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti.

About SBMG Phase II

- SBMG Phase-II will be implemented from **2020-21 to 2024-25** in mission mode with a total estimated outlay of Rs.1,40,881 crores.
- It will use a novel model of convergence between different verticals of financing and various schemes of Central and State Governments to saturate the sanitation facilities for achieving the **Open Defecation Free (ODF) Plus** villages.
  - An ODF Plus village is defined as a village which sustains its ODF status, ensures solid and liquid waste management (SLWM) and is visually clean.
- **Components of SBMG Phase II**
  - Construction of Individual Household Latrines and Community Sanitary Complexes
  - Retrofitting of toilets
  - Works for solid waste management:
    - ✓ **Bio-degradable waste management**: It involves Composting at household and community level and using GOBAR-dhan (Galvanizing Organic BioAgro Resources–dhan) scheme to convert bio-waste into biogas and bio slurry to provide economic and resource benefits to farmers and households.
    - ✓ Plastic waste management
  - Works for liquid waste management: Greywater and Faecal Sludge Management
- **Guiding principles for Implementation**:
  - Ensuring that no one is left behind
  - Community assets for SLWM to be prioritized and financed
  - Utilisation of existing SLWM infrastructure wherever possible
  - SLWM activities related to Reuse to be promoted
  - Convergence with other schemes:
    - ✓ **Jal Jeevan Mission** for greywater management
    - ✓ Finance Commission funds for co-financing of assets
    - ✓ **MGNREGS** for dovetailing of funds and functionaries
    - ✓ Ministry of Skill Development & Entrepreneurship for skill development of field functionaries
    - ✓ **National Rural Livelihood Mission (NRLM)** for involving SHGs as vehicles for Behaviour Change Communication
    - ✓ **New National Biogas and Organic Manure Programme** (NNBOMP) scheme and **Sustainable Alternative Towards Affordable Transportation** (SATAT) Scheme for GOBAR-Dhan projects
  - Use of business models/Creating self-sustainable revenue models
  - Operation and maintenance as an obligatory component of planning
  - Encouragement of technologies with low operation and maintenance costs
  - Flexibility to States and Clustering of villages for maximum economic efficiency
  - Priority to villages on the banks of Ganga and other water bodies
- **Guidelines:**

Planning	• State Governments and UTs would develop- ○ **Project Implementation Plan (PIP)**: for the entire period of the programme from 2020-21 to 2024-25 based on all the sanitation activities to be taken up in the villages, Blocks and districts. ○ **Annual Implementation Plans (AIP)**: every year consolidating the District Swachhata Plans.

	• Each district will prepare a **District Swachhata Plan** after consolidating **Village Action Plans** of its Gram Panchayats and incorporating the interventions to be taken up at Block and District levels.

Funding	• SBMG is a **Centrally Sponsored Scheme** with fund sharing pattern between Centre and States being
	  ○ 90:10 for North-Eastern States, Himachal Pradesh, Uttarakhand and UT of Jammu and Kashmir,
	  ○ 100% from Centre for remaining Union Territories (UTs), and
	  ○ 60:40 for other States.
	• Funds will be released to States/UTs based on their performance and ability to achieve programme results. Eligibility criteria -
	  ○ The State Cabinet passes a resolution to implement the SBMG Phase II and commits timely release of State share for the programme
	  ○ The State has set up suggested institutional arrangement for implementation and management of SBMG Phase II components
	  ○ Agrees to devolve funds to Gram Panchayats for co-financing of SBMG components and develops a PIP and AIP

Institutional Arrangement	• **National Scheme Sanctioning Committee (NSSC)** to approve or revise the Perspective Plan called the **PIP** for the States/UTs, and the **AIP** submitted by the State Level Scheme Sanctioning Committee (SLSCC) • **Apex Committee** at the State level to aid and advise the State SBMG (SSBMG) • **Implementing bodies** at State, District, Block and Village levels.

Monitoring & Evaluation	• **DDWS, at the Central level**, shall lead the monitoring and evaluation function in coordination with States and Districts.
	• Progress will be monitored using an **Output-Outcome Monitoring Framework**.
	• Methods of Monitoring will involve:
	  ○ An **online Integrated Management Information System (IMIS)**
	  ○ **Geo-tagging** all assets constructed under the programme
	  ○ Annual monitoring through **'Swachh Survekshan Grameen - SSG'**
	  ○ **Social Audit** meeting held in each GP once in six months.

Note: For more details on SBMG Phase II, please refer to VisionIAS Current Affairs-March 2020 edition.

MONTHLY
CURRENT AFFAIRS
REVISION 2021
GS PRELIMS + MAINS
LIVE / ONLINE CLASSES AVAILABLE
Scan the QR CODE to download VISION IAS app
Starts 24 June 1:30 PM
Detailed topic-wise up-to-date contextual understanding of all current issues.
Opportunities for discussion and debate through "Talk to expert" and during offline presentations in class.
Assessment of your understanding through MCQs and Mains oriented questions after each topic.
Two to three classes will be held every fortnight.
The Course plan (35-40 classes) covers important current issues from standard sources like The Hindu, Indian Express, Business Standard, PIB, PRS, AIR, RS/LSTV, Yojana etc.
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7. SCIENCE AND TECHNOLOGY

7.1. COVID-19 THERAPIES AND ANTIMICROBIAL RESISTANCE (AMR)

Why in News?

There are concerns that potentially **fatal bacterial respiratory infections** may arise during hospital stays and **because of therapies given to COVID-19 patients**.

What is AMR?

- AMR happens **when microorganisms** (such as bacteria, fungi, viruses, and parasites) **change when they are exposed to antimicrobial drugs** (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics).
  - Microorganisms that develop AMR are sometimes referred to as superbugs.
- As a result, the **medicines become ineffective and infections persist in the body,** increasing the risk of spread to others.
  - AMR occurs naturally over time, usually through genetic changes. However, misuse and overuse of antimicrobials is accelerating this process.

Reasons for AMR

- **Inappropriate use of medicines:** Overuse, underuse and misuse of medicines drives development of drug resistance.
- **Lack of quality medicine:** Weak drug quality assurance systems leading to poor quality medicines and creating conditions for drug resistance to develop.
- **Animal Husbandry:** Sub-therapeutic doses of antibiotics are used in animal-rearing for promoting growth or preventing diseases. This can result in resistant microorganisms, which can spread to humans.
- **Poor infection prevention and control:** It can increase the spread of drug-resistant infections. Hospitalised patients are one of the main reservoirs of resistant microorganisms.
- **Weak surveillance systems:** It impairs the ability to detect emergence of resistance and take prompt actions.

Why is AMR a concern?

- **New resistance mechanisms are emerging and spreading globally,** threatening our ability to treat common infectious diseases, resulting in prolonged illness, disability, and death.
- A growing list of infections such as pneumonia, TB, blood poisoning and gonorrhea are becoming harder, and sometimes impossible, to treat as antibiotics become less effective.
- Without effective antimicrobials for prevention and treatment of infections, **medical procedures and major surgery become very high risk.**
- AMR **increases the cost of health care** with lengthier stays in hospitals and more intensive care required.
- AMR is **putting the gains of the Millennium Development Goals at risk** and endangers achievement of the Sustainable Development Goals.

Initiatives by World Health Organisation (WHO) to address AMR

- **Global Antimicrobial Resistance Surveillance System (GLASS):** supports a standardized approach to the collection, analysis and sharing of data related to antimicrobial resistance at a global level.
- **AWaRE tool:** aimed at guiding policy-makers and health workers to use antibiotics safely and more effectively. It classifies antibiotics into three groups:
  - Access — antibiotics used to treat the most common and serious infections
  - Watch — antibiotics available at all times in the healthcare system
  - Reserve — antibiotics to be used sparingly or preserved and used only as a last resort
- **Global Antibiotic Research and Development Partnership (GARDP):** encourages research and development through public-private partnerships.
- **Interagency Coordination Group on Antimicrobial Resistance (IACG):** established by United Nations Secretary-General to improve coordination between international organizations and to ensure effective global action.
- **Global Action Plan** aims to ensure prevention and treatment of infectious diseases with safe and effective medicines.

- **One Health approach:** to promote best practices to avoid the emergence and spread of antibiotic resistance, including optimal use of antibiotics in both humans and animals.

WHO recommended steps to prevent and control AMR

- **Individuals** to use antibiotics when prescribed by a certified health professional, not to share or use leftover antibiotics, prevent infections by regularly washing hands etc.
- **Policy makers** can ensure a robust national action plan, improve surveillance of antibiotic-resistant infections, make information available on the impact of antibiotic resistance etc.
- **Healthcare industry** can Invest in research and development of new antibiotics, vaccines, diagnostics and other tools.
- **Agriculture sector** can vaccinate animals to reduce the need for antibiotic, improve biosecurity on farms and prevent infections through improved hygiene and animal welfare etc.

AMR Situation in India

- A study published by the Indian Council of Medical Research (ICMR) has found **antibiotic resistant organisms in the digestive tracts of two out of every three healthy persons** that it tested.
  - It was based on analysis of stool samples of 207 individuals who had not taken any antibiotic for at least a month and did not suffer from any chronic illness.
- As per the 2017 Scoping report on antimicrobial resistance in India:
  - AMR bacteria and their genes **have been reported from different water sources.** The major sources are the pharmaceutical waste waters and hospital effluents that are released into the nearby water bodies without adequate treatment.
  - Antimicrobial agents are being **used in abundance to increase the productivity in Animal husbandry.**

Steps taken

- **National Anti-Microbial Resistance Research and Surveillance Network** to strengthen the surveillance of AMR by compilation of National Data of AMR at different levels of Health Care.
- **National Action Plan to combat Antimicrobial Resistance** that aims to understand emergence, spread and factors influencing AMR.
- **Red Line Campaign' for antibiotics packaging** to curb their over-the-counter sale

7.2. PATENT POOLS

Why in news?

International science collaborations on Covid-19 started a discussion on patent pooling.

More on news

- Recently, **Costa Rica suggested pooling of rights** to deal with the pandemic through free or minimal, affordable licensing to ensure that the outcomes of efforts can be used by countries with limited economic resources to deal with the problem.
  - This proposal received full support, except from the US and the UK.

Patent Pooling

- According to **World Intellectual Property Organisation (WIPO)**, patent pools are defined as an **agreement made between two or more patent holders** for licensing their patents to one another or any third party for the purpose of sharing their intellectual property rights.
- Generally, patents pools are made for complex technologies which **necessitate complementary patents** for providing productive technical solutions such as vaccines in the present Covid-19 crisis.
- **'Sewing Machine Combination" of 1856** is considered as the first modern patent pool in the United States.
- Patent pooling structures were actively discussed and considered in response to the SARS outbreak of 2002-03, the H5N1 influenza outbreak of 2005, and the H1N1 influenza pandemic of 2009.
- **Patent pooling ensures:**
  - **innovation** between companies while minimizing potential legal issues related to the use of other protected concepts.
  - **lower transaction costs and better process efficiencies** as businesses that hold complementary patents can effectively agree not to sue each other for infringement as they work to get new products to the marketplace.

International steps towards patent pooling:

- **C-TAP:** The **COVID-19 Technology Access Pool (C-TAP)(hosted by WHO)** compiles pledges of commitment made under the Solidarity Call to Action to voluntarily share COVID-19 health technology related knowledge, intellectual property and data.
- **GISAID:** It promotes the rapid sharing of data from all influenza viruses and the coronavirus causing COVID-19.
    - This includes genetic sequence and related clinical and epidemiological data associated with human viruses, and geographical as well as species-specific data.
    - **According to Global Initiative to Sharing of All Influenza Data (GISAID)**, as of June 2020, **49,781 genome sequences** of the COVID virus have been shared, voluntarily, by researchers from around the world.

India and Patent Pooling:

- The concept of 'patent pooling' is new in India and has been primarily focused to have solutions for the affordable health care.
- **Indian Patents Act (IPA), 1970** does not render for any provisions related to formation of patent pools or any guidelines for the same but at the same time it neither restrain for creation or formation of patent pools.
    - Under IPA, Central Government can set up patent pool by acquiring inventions and patents which are required in the public interest.
- However**,** in India, patent pooling is viewed as **restrictive practice by Competition Act, 2002,** which are anticompetitive in nature.

- **Medicines Patent Pool (MPP):** It has facilitated the development of generic drugs for HIV, tuberculosis, and hepatitis C, allowing them to be sold at an affordable price.
    - MPP is a United Nations-backed public health organisation working to increase access and facilitate development of life-saving medicines for low- and middle-income countries.
- **Trade Related Intellectual Property Regime (TRIPS):** It allows countries to grant compulsory licences to companies to produce a patented product at times of emergencies.
- **Nagoya Protocol under Convention on Biodiversity (CBD):** Article 2 (e) of the protocol can be interpreted as **including the genetic sequence information** that forms the basis for all ongoing research and development on Covid treatment and prevention.
    - Protocol requires the contracting parties to provide options for access and benefit sharing when genetic resources are used for commercial purposes, which indirectly provides a scope for patent pooling.

7.3. PLASMA BANK

Why in news?

In a first in India, Delhi government has launched a plasma bank for treating covid-19 patients.

About Plasma

- Plasma is the **liquid portion of blood** "yellowish" in color.
- **About 55% of blood is plasma**, and the remaining 45% are red blood cells (RBC), white blood cells (WBC) and platelets that are suspended in the plasma.
- Plasma serves four **important functions in body**
    - Helps maintain blood pressure and volume.
    - Supply critical proteins for blood clotting and immunity.
    - Carries electrolytes such as sodium and potassium to our muscles.
    - Helps to maintain a proper pH balance in the body, which supports cell function.

About Plasma Bank

- The facility is to be set up at the **Institute of Liver and Biliary Sciences (ILBS)**, and will be made available to government and private hospitals.
- **Plasma Bank functions like a blood bank**, and has been created specifically for those who are suffering from COVID-19, and have been advised for plasma therapy by doctors.
- Idea is to **extract and store plasma from people who have recovered from COVID-19** and give it to someone suffering from the disease.
- Delhi has been **using Convalescent Plasma Therapy**, an experimental treatment that doctors are using for people with severe coronavirus disease (COVID-19).
- **The bank was needed because patients were facing problems accessing blood plasma**. It will, however, not be mandatory for patients to contact the bank for plasma therapy.
- **Each plasma donation would be used to treat 2 patients**. The bank collects **500 ml of plasma**, depending on weight.

For more details on Convalescent Plasma Therapy refer to March 2020 Monthly Current Affairs.

7.4. INDIA TUBERCULOSIS REPORT 2020

Why in news?

Union Minister for Health and Family Welfare released the **annual India Tuberculosis Report 2020.**

Key statistics in report

- **Number of cases**
  - **2.4 million cases of tuberculosis (TB) were reported in 2019** (14% higher than last year) and 79,000 deaths.
  - **Reduction in number of missing cases** to 2.9 lakh cases as against more than 10 lakhs in 2017.
    - ✓ **Missing cases refer to** the gap between the estimated and notified incident cases.
  - Provision of HIV testing for all notified TB patients increased from 67% in 2018 to 81% in 2019.
- **Treatment**
  - Due to easy availability of molecular diagnostics, **proportion of children diagnosed with TB increased** to 8% in 2019 compared to 6% in 2018
  - **Improvement in treatment success rate** is 81% in 2019 (69% in 2018).
  - More than 4.5 lakh DOT Centers provide treatment covering almost every village across the country.
- **Ranking of states:** In 2020, Central TB Division (CTD) introduced a quarterly ranking on TB elimination efforts by all States and UTs.
  - In the categories of larger states with more than 50 lakh population, **Gujarat, Andhra Pradesh and Himachal Pradesh** were awarded as best performing States.
  - In the category of smaller states with less than 50 lakh population, **Tripura** and **Nagaland** were awarded.
  - In the category of Union Territory, **Dadara and Nagar Haveli**, and **Daman & Diu** were chosen as the best performers.

About Tuberculosis (TB)

- TB is caused by **bacteria (Mycobacterium tuberculosis)** that most often affect the lungs.
- It spreads from person to person through cough, sneeze or spit
- It typically affects the lungs (**pulmonary TB)** but can also affect other organs (**extrapulmonary TB**).
- **Drug Resistant TB**:
  - **Multidrug Resistance TB (MDR):** It is TB that does not respond to at least isoniazid and rifampicin (2 of the most powerful first line drugs).
  - **Extensively drug-resistant tuberculosis (XDR-TB):** It is resistant to at least four of the core anti-TB drugs. It involves multidrug-resistance (MDR-TB), in addition to resistance to any of the fluoroquinolones (such as levofloxacin or moxifloxacin) and to at least one of the three injectable second-line drugs (amikacin, capreomycin or kanamycin).
  - **Totally drug-resistant tuberculosis (TDR-TB):** TB which is resistant to all the first- and second-line TB drugs.
- **India being the country with highest TB burden** (Global TB report 2019, World Health Organization) requires complete surveillance coverage to detect cases.

Key initiatives and achievements

- **National Strategic Plan (2017-2025):** It has completed 3 years of its implementation.
  - Under this, India is committed to eliminate TB by 2025, 5 years ahead of Sustainable Development Goal-3, 2030.
- **Revised National Tuberculosis Control Program (RNTCP):** It has been renamed as **"National Tuberculosis Elimination Program (NTEP)"** to accelerate momentum towards eliminating Tuberculosis in the country by 2025.
  - NTEP receives funding from **The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM)**, **The World Bank** and other donors.
- **Early accurate diagnosis** being done.
  - **Ziehl-Neelsen acid-fast staining /Fluorescence Microscopy** are the primary tools for diagnosis of patients with **Pulmonary Tuberculosis** presumed to be drug sensitive.
  - Patients at risk of **Multi-Drug Resistant TB (MDR-TB)** are diagnosed using WHO endorsed rapid diagnostics (WRD) like **Cartridge Based Nucleic Acid Amplification Test (CBNAAT) / Line Probe Assay (LPA)/ TrueNAT.**
- **700 TB Forums have been established** as part of community-based response for TB to reach the unreached and to support TB patients.
- On-line notification of TB patients through the **NIKSHAY portal.**

- **NIKSHAY** is **the National TB information system** which acts a one-stop solution to manage information of patients and monitor program activity throughout the country.
- It acts as a **Surveillance tool under NTEP.**
- It provides a **National Data repository of TB information** for advanced analytics.
- It **performs Direct Benefit Transfers to the patients** through integration with Public Financial Management System (PFMS).

Related information
NIKSHAY Poshan Yojana

- Government of India's **National Strategic Plan for Tuberculosis Elimination (2017 - 2025)** provides direct benefit transfer (DBT) for all TB patients in order **to support their nutrition needs** and help address the **financial burden of tuberculosis** for the affected households.
- The scheme is **financed by the Government of India**, with **partial financing** provided through **World Bank.**
- The DBT provides **INR 500 per month** to notified TB and MDR-TB patients for the duration of their treatment.

- India is one of the first countries to adopt the **Communities, Rights and Gender Tools** developed by the **Stop TB Partnership**.
  - **Stop TB Partnership** aims to ensure that every TB patient has access to effective diagnosis, treatment and cure. It was founded in 2001 and has its secretariat in Geneva, Switzerland.
- '**TB Survivors to TB Champions'** is an important strategy in engaging with TB affected communities.
  - A national level standardised training curriculum has been developed for capacity building of TB survivors. **304 TB Survivors have undergone training as TB Champions**.
- The **TB Sample Transport Network** has been widened through support from **Department of Post's services for specimen transportation from peripheral health facilities to TB diagnostic laboratories**. This will help expand drug susceptibility testing services.

7.5. INDIAN NATIONAL SPACE PROMOTION AND AUTHORIZATION CENTRE (IN-SPACE)

Why in news?

Government of India has created **Indian National Space Promotion and Authorization Centre (IN-SPACe)** to boost private sector participation in entire range of space activities.

New Space India Limited (NSIL)

- It is the **commercial arm of ISRO** with the primary responsibility of enabling Indian industries to take up high technology space related activities.
- It is a **wholly owned Government of India company**, under the administrative control of Department of Space (DOS).
- **NSIL does not replace ANTRIX** which still exists and has similar functions.
  - Antrix was incorporated as a private limited company owned by Government of India 1992 in as a **Marketing arm of ISRO** for promotion and commercial exploitation of space products, technical consultancy services and transfer of technologies developed by ISRO.
- **NSIL will work with IN-SPACe** and enable industry consortia to take on some of the activities of ISRO.
- **Major business areas of NSIL** are Launch vehicle production, Production and marketing of space based services, Building satellites, Transfer of technology etc.

About IN-SPACe

- It is the **new entity of the Department of Space** which will have its own chairperson and board.
  - It will **regulate and promote building of routine satellites**, rockets and commercial launch services through Indian industry and startups.
  - It will **have its own directorates for technical, legal, safety and security,** monitoring and activities promotion.
- It will **act as an interface between ISRO and private parties**, and assess how best to utilise India's space resources and increase space-based activities.
  - It will function autonomously and parallel to ISRO.
  - **Indian Space Research Organisation (ISRO) will remain the basic body** that decides what missions are to be undertaken but IN-SPACe will help fill the gaps.
- It is the **second space organisation** created by the government in the last two years. The first one was **New Space India Limited (NSIL)** after it was announced in 2019 Budget**.**
- **Key Benefits of IN-SPACe:**
  - It will **provide a level playing field for private companies** to use Indian space infrastructure.

- It will also **hand-hold**, **promote and guide** the private industries in space activities through **encouraging policies** and a **friendly regulatory environment**.
- It will **assess the needs and demands of private players**, including educational and research institutions, and, explore ways to accommodate these requirements in consultation with ISRO.
- It aims to **empower private companies in creation of launch vehicles and launch pads** with technological input and consultation from ISRO.
- It will **allow ISRO to allocate more time and resources** for R&D endeavours.
- It will also **enhance the socio-economic use of space assets and activities**, including through improved access to space assets, data and facilities.

For more details on Participation of private sector in space activities, refer May 2020 Current Affairs Magazine.

7.6. JOINT LUNAR POLAR EXPLORATION MISSION

Why in News?

Recently, details of Joint Lunar Polar Exploration (LPE) mission were released by Japan Aerospace Exploration Agency (JAXA).

Details of the mission	
Launch Year	After 2023
Launch Vehicle	H3 Rocket
Launch Mass	6 tonne+
Payload Mass	350kg+ (including rover)
Operating Period	More than 3 months
Landing Point	Southpole region of the Moon
Major Missions	Water Detector
	Science instrument
	Environment Measuring Instrument

Details of the Mission

- It was conceptualized as joint mission between JAXA and Indian Space Research Organisation (ISRO) in 2017 which aims **to put a lander and a rover on the Moon's surface.**
- As per details shared by JAXA (see infographic), it will be launched after 2023.
- The mission would last for about six months and will target a constantly sunlit region near the **Moon's South Pole.**
- JAXA would be building the overall **landing module and rover** and ISRO would develop **lander system.**
- Rover will conduct an observation of the areas where **water may be presently distributed**. If it detects hydrogen, the rover will then mine the surface to collect samples.
- **Objectives of LEM**
  - **Obtain actual data regarding quantity of water** of areas where water is anticipated to exist.
  - Understand **distribution, conditions, form and other parameters of lunar water** resources at the moon's South Pole.
  - Improve technology needed to **explore surface of low-gravity celestial bodies** in order to support future lunar activities.
  - Determine **feasibility of utilizing such resources** for sustainable space exploration activities in future.

Why Moon's South Pole is special?

- Its craters have been untouched by sunlight for billions of years — **offering an undisturbed record of the solar system's origins.**
- Its permanently shadowed craters are **estimated to hold nearly 100 million tons of water**.
- Its elemental and positional advantages make it a **suitable pit stop for future space exploration.**
- It has traces of hydrogen, ammonia, methane, sodium, mercury, and silver — making it an **untapped source of essential resources.**

7.7. QUANTUM KEY DISTRIBUTION

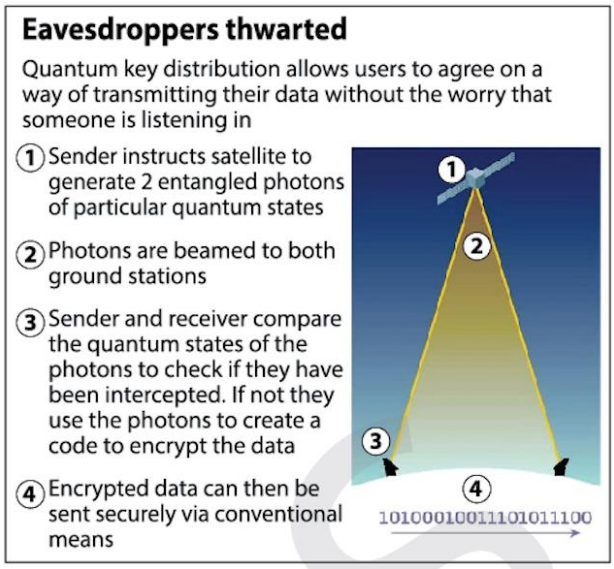
Why in News?

Recently, a **satellite-based communication between two ground stations** was activated by entangled-based quantum key distribution (QKD).

More on news

- The communication between two stations more than 1,120 kilometers apart was activated by QKD.
- This was achieved by **Micius** (also known as the Quantum Experiments at Space Scale), **World's first quantum-enabled satellite.** Micius was launched by China in 2016**.**

About Quantum Key Distribution


Eavesdroppers thwarted
Quantum key distribution allows users to agree on a way of transmitting their data without the worry that someone is listening in
1 Sender instructs satellite to generate 2 entangled photons of particular quantum states
2 Photons are beamed to both ground stations
3 Sender and receiver compare the quantum states of the photons to check if they have been intercepted. If not they use the photons to create a code to encrypt the data
4 Encrypted data can then be sent securely via conventional means
1
2
3
4
10100010011101011100

- QKD is a technique that **allows for secure distribution of keys to be used** for encrypting and decrypting messages.
- In **traditional cryptography**, the security is usually based on the fact that an adversary is unable to solve a certain mathematical problem.
- In QKD, security is achieved through the **laws of quantum physics.**
- Two such most important laws are **Superposition and Entanglement.**
  - **Superposition** means that each **quantum bit** (basic unit of information in a quantum computer) can represent both a 1 and a 0 at the same time.
  - **In quantum entanglement**, subatomic particles become "entangled" (linked) in such a way that any change in one disturbs the other even if both are at opposite ends of the universe.
- Quantum Satellite serves **as source of pairs of entangled photons, twinned light particles** whose properties remain intertwined no matter how far apart they are.

About Quantum Technology

- Quantum technology seeks to **harness laws of quantum physics**, which describe the behaviour of matter and energy at the atomic and subatomic level.
- **This is unlike classical physics**, in which an object can exist in one place at one time. E.g. classical computers operate using binary physical state, meaning its operations are based on one of two positions (1 or 0).
- Quantum principles will be used for **engineering solutions to extremely complex problems** in computing, communications, sensing, chemistry, cryptography, imaging and mechanics.
- **Some applications of Quantum Technology are:**
  - **Quantum Computing** with potential applications in precise navigation for defence and civilian applications, accelerated drug development by accurate chemical simulations etc.
  - **Quantum metrology** to provide more capable means of detecting stealth aircraft, submarines and also mineral exploration and water resource management etc.

Related term: Quantum Supremacy

- It's the point at which a quantum computer can **complete a mathematical calculation that is beyond the reach of even the most powerful supercomputer.**
- Recently, **Sycamore (Google's quantum computer)** took 200 seconds to perform a calculation that the world's fastest supercomputer, **Summit**, would have taken 10,000 years to accomplish.

7.8. FIFTH STATE OF MATTER

Why in news?

NASA Scientists recently **observed the fifth state of matter in space** for **the first time** as part of **Bose Einstein Condensates (BEC) Experiments** aboard the **International Space Station (ISS).**

About fifth state of matter

- The existence of **Bose Einstein Condensate,** also known as the fifth state of matter was predicted by **Albert Einstein** and Indian mathematician **Satyendra Nath Bose** in early 1920s.
  - **Solids, liquids, gases and plasma** are the other **four states of matter.**
- BEC is a **supercooled gas that no longer behaves as individual atoms and particles**, but rather an entity in a single quantum state**.**
- BECs are formed when atoms of certain elements are **cooled to near absolute zero (0 Kelvin**, **minus 273.15 Celsius).**
- **When they reach that temperature**, the atoms become a **single entity with quantum properties**, wherein each particle **also functions as a wave of matter**.

- BECs are **extremely fragile** and the slightest interaction with the external world is enough to warm them past their condensation threshold.
- This makes it nearly **impossible for scientists to study them on Earth**, where **gravity interferes** with the magnetic fields required to hold them in place for observation.
- **BEC experiments** will help in
  - Tests of **general relativity**
  - Searches for **dark energy** and **Gravitational waves**
  - **Spacecraft navigation**
  - **Quantum mechanics** on a macroscopic level
  - Prospecting for **subsurface minerals** on moon and other planetary bodies.

About Plasma – Fourth state of matter

- Plasma is like a **gas, but comprised of positive ions and free electrons** with little or no overall electric charge.
- Because of presence of charged ions, plasma is **highly electrically conductive** and **responds strongly to magnetic and electric fields** (unlike gas).
- Plasmas have **no fixed shape or volume**, and are less dense than solids or liquids.
- Plasma is the **most common state of matter** in the **Universe** comprising more than **99% of our visible universe**.
- Plasma **occurs naturally** in **sun,** the **core of stars**, **quasars, X-ray beam emitting pulsars and supernovas.**
- **On Earth**, plasma naturally occurs in **flames, lightening and the auroras**.
- Plasmas can be formed by **heating a gas to high temperatures**, as, when heated, the atoms in the gas either gain or lose electrons (ionization).

7.9. ANNULAR SOLAR ECLIPSE

Why in news?

Recently, the annular solar eclipse and summer solstice occurred on the same day for the first time in 19 years.

Summer Solstice

- is the longest day of the year. It **is on June 21st in Northern Hemisphere.**
- According to NASA, the **amount of incoming energy the Earth received from the Sun on this day is 30 per cent higher at the North Pole than at the Equator.**
- Solstices are opposite on either side of the equator, so the summer solstice in the Northern Hemisphere is the winter solstice in the Southern Hemisphere, and vice versa.

About Solar eclipse

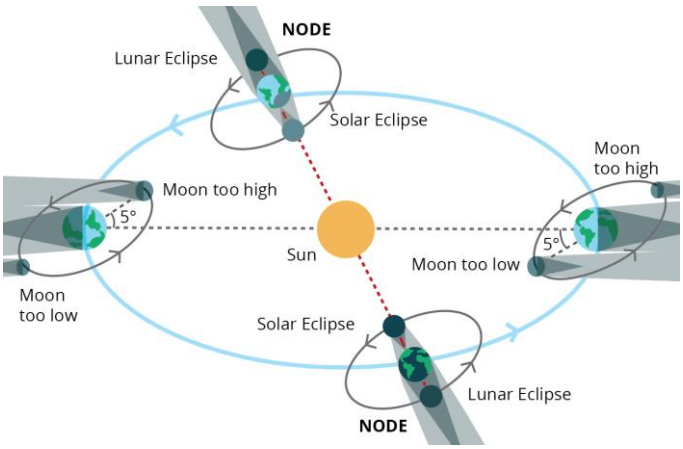
A solar eclipse **occurs at New Moon**, when the moon moves between the Sun and the Earth. Solar eclipses happen once every 18 months. Unlike lunar eclipses, solar eclipses only last for a few minutes.

Lunar nodes

- The Moon's orbit around the Earth is tilted with relation to the Earth's orbital plane by **5 degrees** with two intersecting points – **'Ascending Node'** and **'Descending Node.'**
- Thus, despite the Moon being between the Earth and Sun on every new Moon, the three do not always come on a straight line or cause an eclipse.
- These nodes also rotate around the Earth once in **18 years.**
- In this way, if a new Moon takes place when a node is also between the Earth and Sun, the three come in a straight line and an eclipse takes place.

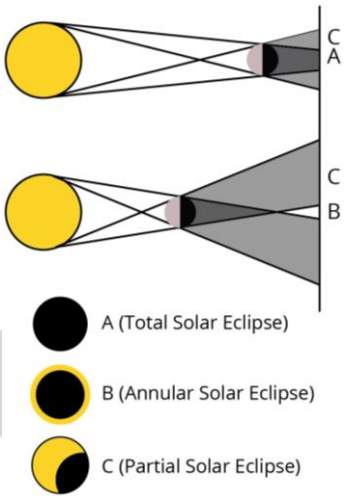
There are four types of eclipses:

- **Total solar eclipse**: Total solar eclipses are rare at any particular location because totality exists only along a narrow path on the Earth's surface traced by the Moon's **full shadow or umbra**.
  - It happens when:
    - ✓ it is New Moon.
    - ✓ the Moon is near **perigee** (the closest point of the Moon from Earth).
    - ✓ the Moon is at (or very near) a lunar node, so the Earth, the Moon, and the Sun are aligned in a straight (or nearly straight) line.
  - It is visible only from a small area on Earth.
  - People who are able to view the total solar eclipse are in the centre of the moon's shadow as and when it hits the Earth.

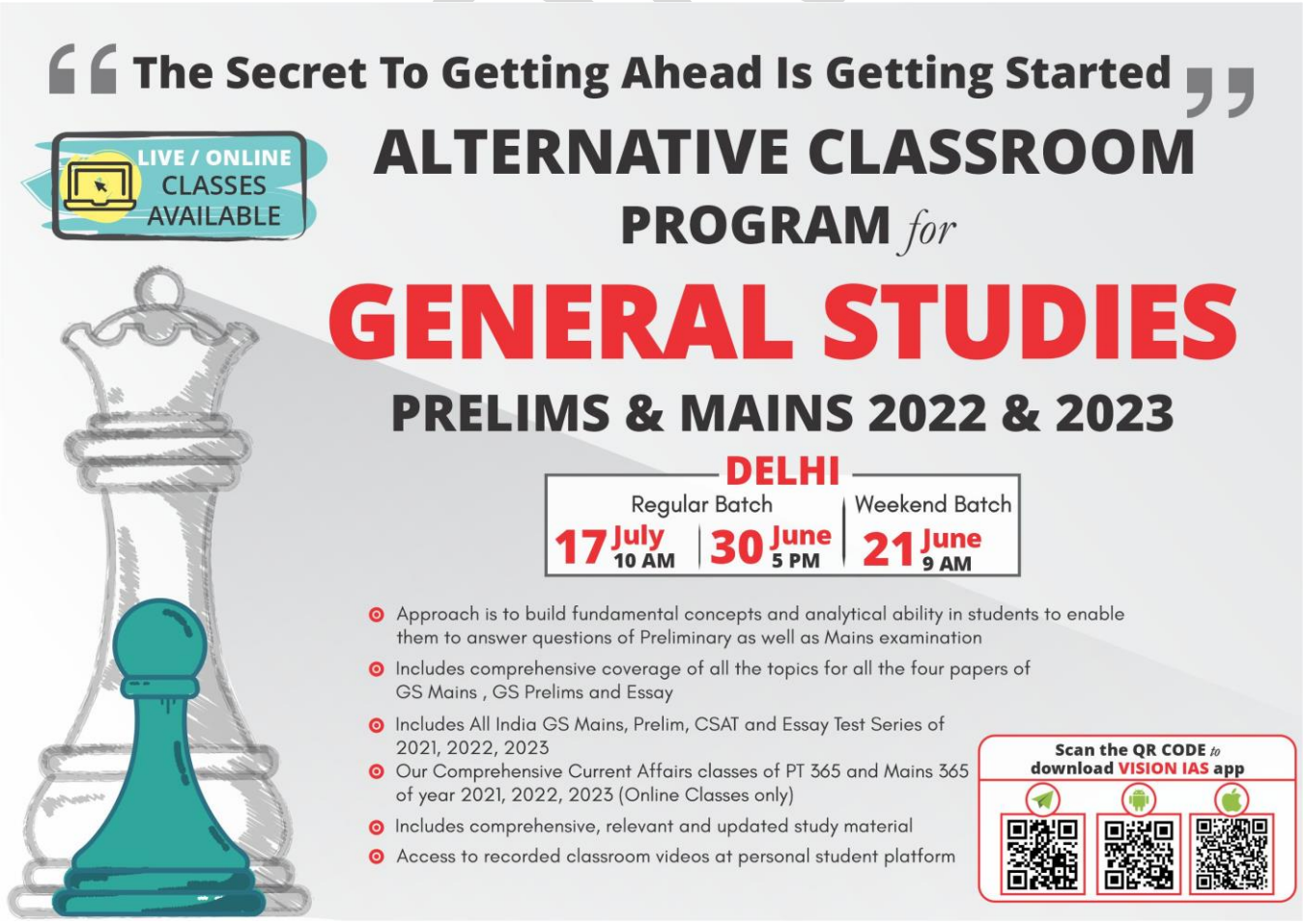


- **Partial solar eclipse**: This happens when the sun, moon and Earth are not exactly lined up. The sun appears to have a dark shadow on only a small part of its surface.

- **Annular solar eclipse (ASE)**:
  - It occurs when the angular diameter of the Moon falls short of that of the Sun so that it cannot cover up the latter completely.
  - Since the moon does not block the sun completely, it looks like a "dark disk on top of a larger sun-colored disk" forming a "**ring of fire**" (or **annulus)**.
  - For an ASE to take place, three things need to happen-
    - ✓ there should be **a New Moon**
    - ✓ the Moon **should be at or very near a lunar node** so that the Sun, Moon and the Earth all are in a straight line
    - ✓ the Moon **should be near the apogee** (the farthest point of the Moon from Earth) so that the outer edge of the Sun is visible.
  - During one of the phases of the ASE a phenomena called **Bailey's Beads'** are visible. This is a thin fragmented ring caused by passage of sunlight through the rough edge of the Moon.
  - This is the only time when one can find **two shadows** for everything in all the sides under the sunlight because the light source during Annularity is a giant illuminating ring.
  - During an ASE, NASA uses ground and space instruments to view top layer of the sun or **corona** when the sun's glare is blocked by the moon.
  - During partial and annular solar eclipses, it is dangerous to view sun without proper equipment and techniques. Not using proper methods and equipment for viewing can cause permanent eye damage or severe visual loss.



- **Hybrid Eclipse:** This is a very rare eclipse where the eclipse will only be annular for the first few seconds. For the rest it will be a total eclipse.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LIVE / ONLINE CLASSES AVAILABLE
ALTERNATIVE CLASSROOM PROGRAM for
GENERAL STUDIES
PRELIMS & MAINS 2022 & 2023
DELHI
Regular Batch
17 July 10 AM
30 June 5 PM
Weekend Batch
21 June 9 AM
Approach is to build fundamental concepts and analytical ability in students to enable them to answer questions of Preliminary as well as Mains examination
Includes comprehensive coverage of all the topics for all the four papers of GS Mains , GS Prelims and Essay
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8. CULTURE

8.1. HERITAGE MANAGEMENT

Why in news?

NITI Aayog released a working **group report on 'Improving Heritage Management in India'.**

Overview

- There are roughly **5 lakh plus heritage sites and monuments** across the country. It includes 3691 ASI Protected Monuments, 38 UNESCO World Heritage Sites, 6000 + State Archaeology Protected Monuments and 4 lakh plus Religious Heritage sites.
- The Constitution of India has divided the **jurisdiction** over these monuments, cultural heritage, and archaeological sites as follows:
  - **Union:** Ancient and Historical Monuments and Archaeological sites and remains, declared by Parliament to be of national importance.
    - ✓ Under the above provision union government has enacted Ancient Monuments and Archaeological Sites and Remains Act **(AMASR Act) of 1958**.
    - ✓ Antiquities and Art Treasures Act, 1972 was enacted to regulate the export trade in antiquities and art treasures and to provide for the prevention and smuggling of, and fraudulent dealings in, antiquities.
  - **State:** Ancient and Historical Monuments other than those declared by Parliament to be of national importance through Departments of Archaeology for the State Protected Monuments and Museums.
  - **Concurrent:** Besides the above, both the Union and States have concurrent jurisdiction over archaeological sites and remains other than those declared by law and Parliament to be of national importance
- **Other constitutional provisions:**
  - **Article 253** of the Constitution of India enables Parliament to legislate for the implementation of any treaty, agreement or convention with any other country or countries, or any decision, made at any international conference, association or other body.
  - **Article 51-A (f)** – puts a duty on every citizen to value and preserve the rich heritage of our composite culture

Archaeological Survey of India(ASI)

- It is the nodal agency responsible for archaeological research and the conservation and preservation of cultural monuments in the country.
- It was founded in 1861.
- It functions as an **attached office to the Ministry of Culture.**
- **The important functions of ASI are identified as**: Exploration/ Excavation; Protection of Monuments and archaeological sites; Registration and Regulation of trade of antiquities; Maintenance and Conservation and Environmental Development; Archaeological Site Museums; Research and Publications; Epigraphical Surveys (Sanskrit, Dravidian, Arabic and Persian); Institute of Archaeology.

NGOs in Heritage Conservation and Management in India

- **The Aga Khan Trust for Culture (AKTC)** focuses on the physical, social, cultural, and economic revitalisation of communities in the developing world.
- **Indian National Trust for Art and Cultural Heritage (INTACH)** spearheads heritage awareness and conservation in India.
- **International Council on Monuments and Sites (ICOMOS)** works for the conservation and protection of cultural heritage places. It is the only global NGO of this kind, which is dedicated to promoting the application of theory, methodology, and scientific techniques to the conservation of the cultural heritage.
- **World Monuments Fund** focuses on heritage conservation projects and awareness programmes in India. Established in 2015, WMF India serves as a local representative for WMF, assisting with project management and outreach.

Related statistics:

- India **ranked 34th** on the **World Travel and Tourism Competitiveness Index 2019,** released by the **World Economic Forum.**
- tourism generated **$240 bn** or 9.2% of India's GDP in 2018
- supported **42.6 mn jobs** - 8.1% of its total employment
- >10 mn foreign tourists arrived in India.

Need for protecting and conserving India's built heritage

- **International Level** - As part of a Universal Shared Heritage to build global relations in future by connecting with stories and routes of cultural exchange through history and, learning from international practices.

- **National Level** - As a tool to Nation Building, and branding of its unique cultural identity with iconic sites and magnificent monuments in each region of India including its World Heritage Sites that narrate its rich, complex and layered history.
- **Local Level** - To guide sustainable development of its historic cities and sites at local level linking directly with reuse and socio-economic benefits to the community while addressing the UN Sustainable Development Goals at the same time.

NITI Aayog report has highlighted various dimensions of heritage management and given its recommendations:

Dimensions	Recommendations

Database and Documentation	• **National Geographic Information Systems (GIS) Database** for monuments and sites to be authenticated and validated with ISRO.
	• **National Mission on Monuments and Antiquities (NMMA)** to be reactivated with budget and staffing.
	  ○ NMMA was launched in 2007 with a mandate covers a comprehensive database with
	  ✓ National Register on Built Heritage & Sites
	  ✓ National Register on Antiquities.

Conservation of National Heritage	• **No conservation funding to** any site should be permitted without availability of a conservation plan. • A **system needs to be developed to ensure greater interaction between the Circle and State Archaeology.**
Excavations and Explorations (E& E)	• **ASI Vision Plan** to be made for exploration and excavation. • **New technology like 3D Laser & Photogrammetry scanning should be used** for surveys, excavation, documentation and conservation works. • Use of scientific methodologies and development of **laboratories for post-excavation analysis.** • **Publication of Excavation Reports** within 6 months period ○ **Delayed report writing** affects the condition and counting of antiquities found during excavation.
Developing Site Museums	• **Budget 2020-21 has proposed five archaeological sites** to be developed as iconic sites with on-site Museums. These **should be completed in next 3 years.** ○ The proposed museums are Rakhigarhi (HR), Hastinapur (UP) Shivsagar (Assam), Dholavira (GJ) and Adichanallur (TN).
Heritage Tourism, Revenue Generation and Marketing	• Adopt **Revenue Generation Model** through PPP Schemes • **Professional and focused marketing** effort using IT. • National Culture Fund to be made autonomous • **Processing of the pending MoUs** under Adopt a Heritage scheme to be accelerated • **Crowdfunding/ community funding/ CSR** to promote community participation.
Upgradation of the ASI	• **Restructuring of ASI**: **Induction of best of talents within the organisation** with flexibility in engaging professionals. • **Increase in the budgetary allocation** for conservation
Urban Heritage	• **Heritage Impact Assessment** to be conducted for infrastructure projects in all heritage areas • HRIDAY has developed a good model for Heritage Planning in the city. Smart Cities focusing on historic cores should adopt a similar model.
World Heritage Sites (WHS)	• Strengthen conservation and management of 38 WHS. • **Strategize World Heritage nominations** (National and Transnational) **for India** Project 'Mausam' to be capitalized for transnational nominations

Other recommendations

International Collaborations for India's Heritage	• **International Heritage Circuits should be developed jointly with other countries** specially where shared heritage is evident such as the Buddhist circuit and Hinduism circuit with South Asian and South East Asian countries.
Skill Development, Community Employment, and	• Creation of an **Indian Institute of Culture** for promoting education, facilitating research, creating leadership, developing technical guidance and supporting skill development in the country.

Institutional Collaborations	• The ASI needs to **identify projects that could be converged with other programmes** such as MNERGA, cultural mapping of artists by the Ministry of Culture, skill development under Hunar se Rozgar program. • Including local community in review of designs and maintenance of monuments.
Vision, Branding and Marketing Model	• **Creation of ICC Model (Cambodia Model):** ASI and MEA model which was operational for Cambodia and other overseas projects including the following may be made operational: • Dedicated Cell for Special Projects – e.g., Ladakh, Fatehpur Sikri, Hampi, Champaner-Pavagadh, etc. • Hiring of multi-disciplinary experts for each project.

Conclusion

Unlike other western nations, India's Cultural Heritage shows continuity since centuries where age old traditions continue to be practiced. Currently, India's Heritage is underfinanced and, a Comprehensive Vision for Heritage Budget and Planning with innovative means of financing is essential. This heritage does not just constitute the important markers of India's past but also presents a unique opportunity for generating employment and incomes through heritage tourism and local development.

Initiatives by the Government of India to conserver heritage:

- **HRIDAY - National Heritage City Development and Augmentation Yojana** – for preserving and revitalizing the unique character of the heritage cities in India.
- **PRASHAD: Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive'-** for development and beautification of identified pilgrimage destinations (>40 sites).
- **Swachh Iconic Places**- under Swachh Bharat Mission to transform monuments as model 'Swachh Tourist Destination' to enhance the experience of tourists.
- **'ADOPT A HERITAGE'-** "Apni Dharohar, Apni Pehchaan**":** To provide world class facilities like Red Fort (Dalmia group) by engaging private sector.
- **Swadesh Darshan scheme** by Tourism Ministry to develop theme-based tourist circuits & world class infrastructure
- **Incredible India 2.0 campaign**, (2018) international tourism promotion campaign
- **Adarsh Smarak:** ASI has identified 100 monuments to be developed as Model Monuments.
- **Project Mausam:** to re-connect and re-establish communications between countries of the Indian Ocean world, which would lead to an enhanced understanding of cultural values and concerns in their regional maritime milieu.

8.2. MALABAR REBELLION

Why in news?

The year 2021 will be the 100th-year anniversary of the Malabar uprising.

About Malabar rebellion

- The Malabar rebellion, also known popularly as the **Moplah rebellion**, was an armed revolt staged by the **Mappila Muslims of Kerala** against the British authorities and their Hindu landlords in **1921**.
- The six-month-long rebellion is often perceived to be one of the **first cases of nationalist uprisings in Southern India**.
- It occurred within the broader spectrum of the **Khilafat/Non-cooperation movement** led by Mahatma Gandhi.

Background

- Moplahs/Mappilas were the **Muslim tenants** (**kanamdars**) and **cultivators (verumpattamdars)** inhabiting the Malabar region where most of the landlords (**janmi or jenmies**) were upper caste Hindus.
- Moplahs had gained some prominence over their landlords during the Mysorean invasions by Hyder Ali and Tipu Sultan. But after the British occupation of Malabar in 1792 (following the 3rd Anglo-Mysore war), the domination of the Hindu landlords was re-established.
- In this scenario, the Mappilas soon found themselves at the mercy of their Hindu landlords who were sustained by the British authority as their agents.

Causes of the revolt

- **History of feudal conflicts in the Malabar region:** Peasant-landlord relations were historically strained in the region. Evidently, about **32 uprisings** were organized by the Moplahs, between 1836 and 1919, against high caste Hindu landlords, their relatives or assistants and British officials.
- **Agrarian discontent**: The economic condition of Mappila tenants had deteriorated overtime due to oppressive British policies resulting in increased taxation, insecure tenancy, rack renting, forced evictions etc. This had given rise to anti-British and anti-feudal sentiments.
- **Political mobilization of mappilas**: The Congress reached out to the Mappila cultivators to mobilize support for independence through Khilafat movement and support agrarian reforms in the region.
  - A **Khilafat committee** was formed in Malabar in June 1920, which became increasingly active.
  - In August, 1920, **Gandhi along with Shaukat Ali** (the leader of the Khilafat movement in India) visited Calicut to spread the combined message of non-cooperation and Khilafat among the residents of Malabar.
  - By January 1921, the Mappilas, under their religious head **Mahadum Tangal** pledged support to the non-cooperation movement.
- **Immediate cause**: Mappilas under the leadership of **Variyamkunnath Kunjahammed Haji** took up arms in August 1921 due to the arrest of Khilafat leader Ali Musaliyar and a widespread rumour that a prominent mosque in Thirurangadi has been raided.

Course of the rebellion

- It largely took the shape of guerrilla-type attacks on janmis, police and troops.
- Symbols of the colonial state – telegraph lines, train stations, courts, post offices etc. and homes of landlords were attacked.
- When the rebellion spread across the Malabar district, British officers and the local police escaped, leaving **vast tracts of territory firmly under the control of the local rebels**.
  - **The territory was declared an 'independent state'** in August 1921 with Haji as its ruler.
  - For nearly six months, he ran a **parallel Khilafat regime headquartered in Nilambur**, with even its own separate passport, currency and system of taxation.
  - **Tenants were granted the power over the lands** they cultivated along with tax incentives.
- Although the movement started off largely as a protest against British authorities, it acquired communal overtones that culminated into **communal violence**.
- **British suppression of the revolt-**
  - The British government responded to the movement with much aggression, bringing in **Gurkha regiments** to suppress it and imposing **martial law**.
    - ✓ **Wagon tragedy**: Approximately 60 Mappila prisoners on their way to a prison, suffocated to death in a closed railway goods wagon.
  - By January 1922, they had taken back the areas held by the rebels and captured all their key leaders.
    - ✓ Haji was arrested and was sentenced to death along with his compatriots.

8.3. AHOM KINGDOM

Why in news?

In a recent controversy Chaolung Sukapha, the founder of Ahom kingdom, was referred to as a "Chinese invader".

Who is Chaolung Sukapha?

- Sukapha was a **13th-century ruler** who founded the **Ahom kingdom** that ruled Assam for **six centuries**. Contemporary scholars trace his roots to Myanmar.
- He is widely referred to as the **architect of "Bor Asom" or "greater Assam"** due to his successful efforts towards assimilation of different communities and tribes.
- To commemorate Sukapha and his rule, Assam celebrates "**Asom Divas**" on December 2 every year.

About the Ahom Kingdom (1228 to 1824)

- In the 13th century, the Ahoms migrated from regions of present-day Myanmar to the Brahmaputra valley.
- In **1253**, Sukapha established his capital at **Charaidau**, **Assam**.

- They established new states by suppressing the older political system of the **bhuiyans (landlords)**, by conquering powerful kingdoms of the **Chhutiyas (1523) and of Koch-Hajo (1581)** in the 16th century and by subjugating many tribes.
- The Ahom kingdoms faced many invasions from the south-western areas of the Indian subcontinent and were defeated by the Mughals in 1662.
- The rule of this dynasty ended with the Burmese invasion of Assam and the subsequent annexation by the British East India Company following the **Treaty of Yandaboo** in 1826.
- **Administration**-
  - Ahom society was divided **into clans or khels** and a khel often controlled several villages.
  - A census was taken and the people from the more populated areas were transferred to the less populated areas.
  - By the beginning of the 17th century, the administration became almost centralised.
- **Economic structure-**
  - The system of **forced labour** was prevalent in the Ahom kingdoms and these labourers were called the '**paiks**'. Each village had to send a number of paiks by rotation.
  - Men of the kingdom were mostly employed in agriculture, construction of dams and other public works. Many new methods of rice cultivation were developed by the Ahoms.
  - During the times of wars the men served in the armies.
  - There were also different cottage industries and home manufacturers.
- **Culture-**
  - The Ahoms worshipped their **tribal gods** originally, but during the mid-eighteenth century, **Hinduism became a predominant** religion due to the rule of hindu kings. Yet the Ahoms did not adopt Hinduism completely.
  - In the Ahom kingdoms, various arts and literature flourished. Poets and scholars were given land grants and theatre was encouraged.
  - Various translation works were carried out from Sanskrit into the local languages.
  - Historical works, known as **buranjis**, were also written – first in the Ahom language and then in Assamese.
- **Technological advancement-** They used new and advanced ammunitions like the firarms even in the 1530s and began to make gunpowder and cannons by 1660s.

8.4. KUSHINAGAR

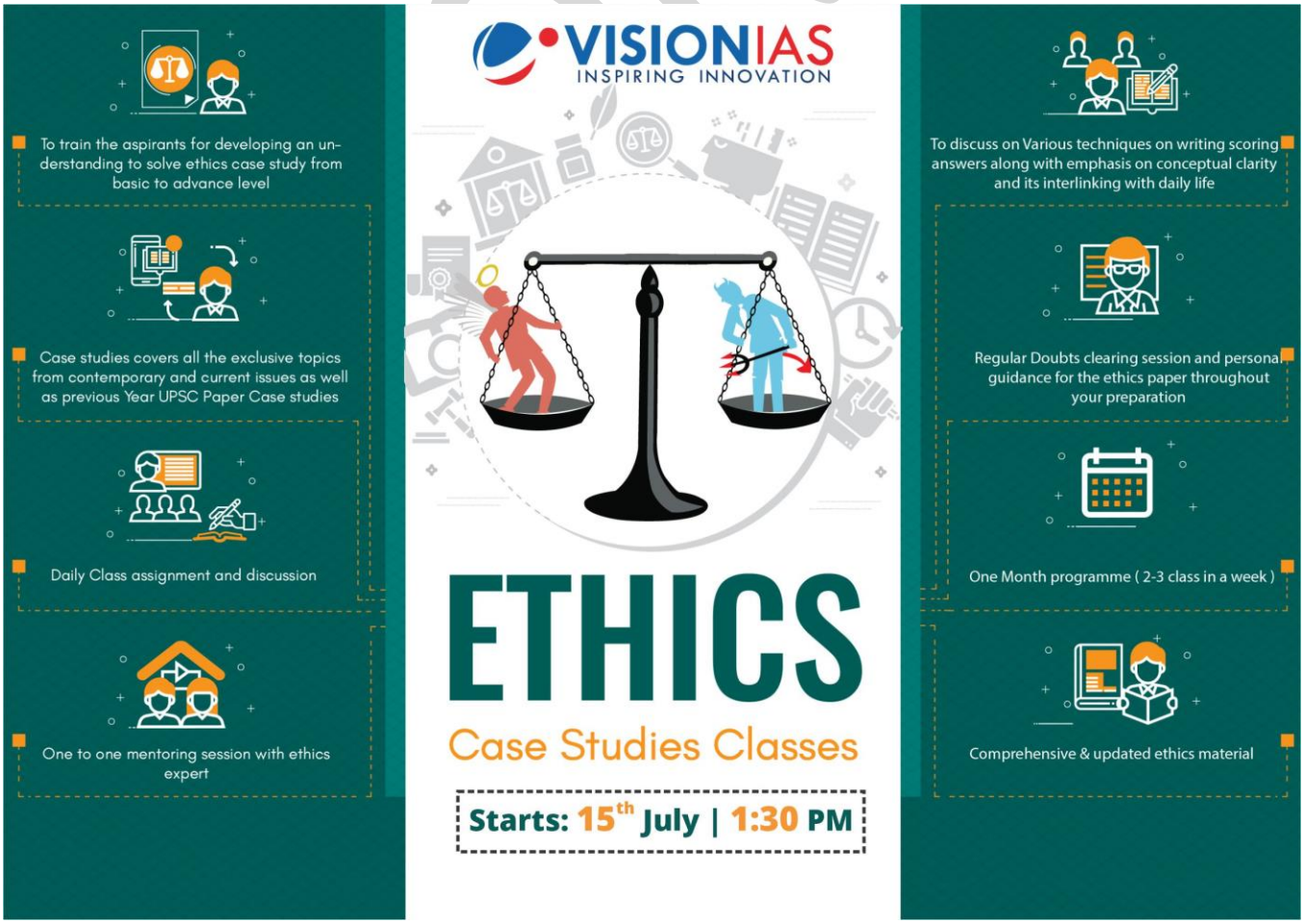
Why in News?

The Union Cabinet has recently given its approval for declaration of Kushinagar Airport in Uttar Pradesh as an **International Airport**.

About Kushinagar

- Kushinagar is one of the important **Buddhist Pilgrimages sites** and is also a part of the **Buddhist Circuit** as Lord Buddha attained **Mahaparinirvana** here.
  - Mahaparinirvana in Buddhism refers to the **ultimate state of Nirvana (everlasting, highest peace and happiness)** entered by an awakened being at the moment of physical death.
- Prominent archaeological sites in the city are the **Mahaparinirvana Stupa** and temple (the latter houses a stunning 1,500-year-old reclining Buddha) and the **Muktabandhan Stupa** (representing the Buddha's cremation site).

- The site of Kushinagar was first identified by **Sir Alexander Cunningham** in 1877, the first Director-General of the Archaeological Survey of India (ASI).
- **Other important buddhist sites are:**
  - **Lumbini**- Buddha's Birthplace.
  - **Bodh Gaya**- where Buddha attained Enlightenment.
  - **Sarnath**- where Buddha gave his first sermon after attaining Enlightenment.
  - **Kapilvastu-** where Buddha grew up as a child.
  - **Kaushambi**- where Buddha delivered many sermons.
  - **Sankisa**-Lord Buddha is believed to have descended here after giving sermon to his mother in heaven.
  - **Sravasti**- where Buddha showed his divine prowess to impress upon the non-believers and delivered important sermons.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Regular Doubts clearing session and persona guidance for the ethics paper throughout your preparation
One Month programme (2-3 class in a week)
Comprehensive & updated ethics material

9. ETHICS

9.1. ETHICS OF CLINICAL TRIALS

Why in news?

Recently, Indian Council of Medical Research (ICMR) announced that two indigenous vaccine candidates will enter clinical trials in the month of July.

Introduction

Clinical trials are research studies performed in people that are aimed at evaluating a medical, surgical, or behavioural intervention. Clinical trials are essential in the development of medicines. Without trials, the efficacy, safety and optimal use of medicines will be very difficult to determine.

Ethics in clinical research focuses largely on identifying and implementing the acceptable conditions for exposure of some individuals to risks and burdens for the benefit of society at large. Thus, it becomes especially important that **patients who are involved in clinical trials are not used as a means to an end.**

Evolution of global ethical standards in Clinical Trials

What are the Rights of Research Participants?
- Free informed consent
- Access to information
- Confidentiality with respect to identity
- Special consideration to vulnerable population
- Post-trial access to remedy

- Ethical guidelines for clinical research were formulated only after discovery of inhumane behaviour with participants during research experiments. For instance, several inhuman experiments were conducted by Nazi Germany on Jews in Concentration Camps during World War II. The discovery of these experiments led to **formulation of Nuremberg code** in Germany to prevent recurrence of such episodes.
- With increasing research all over, World Health Organization formulated guidelines in the form of **Declaration of Helsinki in 1964**. (It was adopted at 18th WMA General Assembly.) It has been revised five times and the latest version was published in 2000.
- With the increasing interest of pharmaceutical industries in carrying out research experiments in the developing and the under developed countries, in 1982, the Council for International Organizations of Medical Sciences (CIOMS) in association with World Health Organization (WHO) developed '**International Ethical Guidelines for Biomedical Research Involving Human Subjects'.**
- The Indian Council of Medical Research has laid down the '**Ethical Guidelines for Biomedical Research on Human Subjects**' in the year 2000 which were revised in 2006. It gives **twelve general principles to be followed** by all biomedical researchers working in the country.

Twelve General Principles of Clinical Trials as highlighted by ICMR

1. **Principle of essentiality**: research should be essential for the advancement of knowledge that benefits patients, doctors and all others including the planet.
2. **Principles of voluntariness, informed consent and community agreement:** research participant should be aware of the nature of research and the probable consequences of the experiments
3. **Principle of non-exploitation:** research protocol should include provisions of compensation for the human participants to cover all foreseeable and hidden risks.
4. **Principle of privacy and confidentiality:** data acquired for research purpose should be kept confidential
5. **Principle of precaution and risk minimisation:** to prevent research participant from any harm and adverse events.
6. **Principle of professional competence:** Clinical research should be carried out only by competent and qualified persons in their respective fields.
7. **Principle of accountability and transparency**: The researcher should conduct experiments in fair, honest, impartial and transparent manner after full disclosure of his/her interests in research.
8. **Principle of the maximisation of the public interest and of distributive justice:** The results of the research should be used for benefit of all humans and not only to those who are socially better off.
9. **Principle of institutional arrangements:** all institutional arrangements required to be made in respect of the research and its subsequent use or applications should be duly made in transparent manner.
10. **Principle of public domain:** The results of any research work done should be made public.

11. **Principle of totality of responsibility:** All those directly or indirectly connected with the research should take the professional and moral responsibility, for the due observance of all the principles, guidelines or prescriptions laid down in respect of the research.
12. **Principle of compliance:** All those associated with the research work should comply by the guidelines pertaining to the specific area of the research.

What are the persistent challenges?

- **Disproportionate participation of poor people:** In developing countries like India, most of the research participants are uneducated and economically backward. There have been instances of exploitation of vulnerable sections for clinical data.
- **Lack of enforceability:** Ethical guidelines in India are of recommendatory nature and do not have the force of law.
- **Absence of specialized training:** Doctors are specially trained to be good clinicians but are seldom taught even the fundamentals of ethical clinical research.
- **Disproportionate burden on developing countries:** Pharmaceutical companies from developed countries collect the clinical data for their new and experimental drugs from the population in less developed countries. Most of these drugs are never be used the communities from where the experimental data are collected.

Phase	Participants	Purpose
Phase 1	Small number of participants (Generally 20-80)	To evaluate safety, identify side effects and determine a safe dose range.
Phase 2	Large number of participants (Generally in 100s)	To further evaluate safety and access its efficacy.
Phase 3	Larger number of participants than Phase 2 (Generally in 1000s)	To further evaluate its effectiveness and determine whether the agent should be approved and marketed.
Phase 4	Various populations	To collect additional information after the agent has been approved and marketed. (Usually for a long period of time.)

How COVID-19 has generated a new challenge?

In a desperate bid to contain the highly-infectious virus, which is spreading at an alarming rate, medical researchers are experimenting with multiple vaccine candidates. For instance, the Drugs Controller General of India (DCGI) has permitted two vaccines including ZyCoV-D. (Which has already been tolerated well in the preclinical trials.)

But this urgent need for a vaccine has created some apprehensions. **Starting Phase-II and Phase-III trials simultaneously** could considerably increase the risk associated with side effects. (As Phase-II acts as a safety check before Phase-III trials.) Also, the pandemic is negatively impacting the clinical trials of non-COVID vaccines.

Way Forward

- **Training of doctors:** in the elements of ethical clinical research.
- Providing **legal backing to Ethical guidelines.**
- Investigators and research teams must be offered **fair reimbursement.**
- **Benefits and risks to the wider community** should be taken into account as well. For instance, relatives have a right to know about genetic abnormalities identified in a patient.
- Adequate information about the research should be given in a **simple and easily understandable vernacular language**.

In essence, clinical trials should be conducted only if the researcher knows they are the right person for the task, that the question is worth addressing, and the study will provide a valid answer.

10. NEWS IN SHORT

10.1. UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES (UNHCR) GLOBAL TRENDS REPORT

- UNHCR is a **global organization dedicated to saving lives, protecting rights and building a better future** for refugees, forcibly displaced communities and stateless people.
  - It was **created in 1950, during the aftermath of the Second World War,** to help millions of Europeans who had fled or lost their homes.
- **Key highlights**
  - **Atleast 100 million people were forced to flee their homes** in the past decade.
    - ✓ Out of this, **40% are Children** (30-34 million) are among the displaced.
  - **Forced displacement has almost doubled** since 2010 (41 million in 2010 vs 79.5 million in 2019).
  - **80% of world's displaced people** are in countries or territories affected by acute water scarcity, food insecurity and malnutrition.
  - **Five countries account for two-thirds of people displaced across borders**: Syria, Venezuela, Afghanistan, South Sudan and Myanmar.
  - **85% are in developing countries**, generally a country neighbouring the one they fled.
  - There are around **1,95,105 refugees in India at end of 2019.**

10.2. STRATEGIC SECTOR

- Under Atmanirbhar Bharat package, a new Public Sector Enterprise (PSE) policy has been announced with plans to privatise PSEs, except the ones functioning in certain strategic sectors.
- Under the proposed policy government will come up with list of strategic sectors.
- Each strategic sector will consist, **at least one and no more than four Public Sector Enterprises (PSEs).**
- **PSEs of other sectors will be privatised, merged** or brought under a holding company.
- The move is expected to **minimise wasteful administrative costs and improves efficiency.**

Strategic sector

- Government, in 1999 classified the PSEs into strategic and non-strategic areas **for the purpose of disinvestment.**
- The industrial activities or industries **belonging to sectors of national importance** are categorised as Strategic sectors.
- Currently, **following areas are categorised as strategic PSEs:**
  - Arms & Ammunition and the allied items of defence equipment, defence air-crafts and warships.
  - Atomic Energy (except areas related to operation of nuclear power and applications of radiation and radio-isotopes to agriculture, medicine and non-strategic industries).
  - Railways transport.
- All other CPSEs are considered as non-strategic. For the **non-strategic PSEs**, Government stake would be reduced, manner and pace of doing so to be worked out on a case-to-case basis.

10.3. KISAN CREDIT CARDS (KCC) CAMPAIGN LAUNCHED FOR 1.5 CRORE DAIRY FARMERS

- It aims to **provide short term credit to dairy farmers** for meeting their requirements for working capital, marketing etc.
  - It is **part of Atma Nirbhar Bharat package** to cover 2.5 crore new farmers under KCC scheme.

About KCC Scheme

- It was introduced in 1998 to **issue KCC to farmers on basis of their holdings** for uniform adoption by banks with flexible and simplified procedure.
- It provides **adequate and timely credit support to the farmers from the banking system** for their cultivation and other needs like
  - Short term credit requirements
  - Post-harvest expenses
  - Consumption requirements of farmer household
  - Working capital for maintenance of farm assets and activities allied to agriculture
  - Investment credit requirement for agriculture and allied activities
- It also provides the **facility of ATM enabled RuPay Card**, one-time documentation, built-in cost escalation in limit and any number of drawals within limit.
- **Implemented by** Commercial Banks, RRBs, Small Finance Banks and Cooperatives
- **Eligiblity:** small farmers, marginal farmers, share croppers, oral lessee and tenant farmers, Self Help Groups or Joint Liability Groups of farmers.
  - In 2018-19, KCC facility was extended to Animal Husbandry farmers and Fisheries.

10.4. THE URBAN LEARNING INTERNSHIP PROGRAM (TULIP) LAUNCHED

- TULIP portal was launched jointly by **Ministry of Housing & Urban Affairs (MoHUA) and All India Council for Technical Education.**
- TULIP is a program for **providing internship opportunities to fresh graduates** in all Urban Local Bodies (ULBs) and Smart Cities across country.
  - **Applicants must be Indian citizens** who have completed their final year of college within last 18 months.
  - Programme **does not have any budget of its own**.
  - It was earlier proposed in Union budget 2020-21 announcement.
- It will have an **integrated digital platform** which allows interns and all ULBs/smart cities to interact and engage under one roof.
  - MoHUA will also undertake **capacity building initiatives in partnerships with State Governments** to enable participation of ULBs and smart cities under TULIP.
- **Expected benefits to ULBs, and smart cities**
  - Gaining **short term talent** to increase productivity
  - Offering **management experience** to mid-level employees
  - **Full-time employees** focus on essential tasks
  - Building **local community capacities**
- **Expected benefits to interns**
  - Gain **insider and realistic view of urban government system** and acquire hands-on work experience
  - **Integrate academic coursework** with practical application and skill development.

10.5. STRENGTHENING TEACHING-LEARNING AND RESULTS FOR STATES PROGRAM (STARS)

- World Bank (WB) approved **a $500 million STARS Program** which aims to improve quality and governance of **school education in six States.**
  - States include **Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha and Rajasthan.**
  - It will provide benefit to **25 crore students and 1 crore teachers** in 15 lakh schools.
- STARS will support **following reform initiatives**.
  - Focusing on delivery of education services by **providing customized local-level solutions** towards school improvement.
  - Addressing demands from stakeholders, especially parents, for **greater accountability and inclusion** by
    - ✓ Producing better data to assess the quality of learning;
    - ✓ Giving special attention to students from vulnerable sections
    - ✓ Delivering a curriculum that keeps pace with the rapidly evolving needs of the job market.
  - Individualized, **needs-based training** for teachers.
  - **Strengthening foundational learning for children in classes 1 to 3** and preparing them with the cognitive, socio-behavioral and language skills to meet future labor market needs.
- At the national level, through **Samagra Shiksha Abhiyan**, and in partnership with the 6 states, it will **help improve**
  - learning assessment systems;
  - strengthen classroom instruction and remediation;
  - facilitate school-to-work transition;
  - strengthen governance and decentralized management.

10.6. CHAMPIONS TECHNOLOGY PLATFORM

- **CHAMPIONS** (**C**reation and **H**armonious **A**pplication of **M**odern **P**rocesses for **I**ncreasing the **O**utput and **N**ational **S**trength) is a robust ICT based system launched recently.
- It aims to **empower MSMEs by providing** grievance redressal for MSMEs, help MSMEs capture new opportunities, identify and encourage potential MSMEs to become national/ international champions.

10.7. SWADES (SKILLED WORKERS ARRIVAL DATABASE FOR EMPLOYMENT SUPPORT)

- It is a **joint initiative** of Ministry of Skill Development & Entrepreneurship, Ministry of Civil Aviation and Ministry of External Affairs.
- This is an initiative **to conduct a skill mapping exercise of returning citizens** under Vande Bharat Mission.
- It aims **to create a database of qualified citizens** based on their skill sets and experience to tap into and **fulfil demand of Indian and foreign companies**

10.8. SKILLS BUILD REIGNITE (SBR) AND SKILLS BUILD INNOVATION CAMP (SBIC)

- It is a partnership between **Ministry of Skill Development & Entrepreneurship and IBM.**

- SBR seeks to **provide job seekers and entrepreneurs, with access to free online coursework and mentoring support** designed to help them reinvent their careers and businesses.
- SBIC is **10-week program which supports 100 hours of structured learning** to for gaining hands-on project experience to enhance learning and building network and enhance employability.

10.9. SAHAKAR MITRA

- It is an **internship programme to provide paid internship** to youth and ensure availability of assured project loans to young cooperators.
  - **Professional graduates** in disciplines such as Agriculture and allied areas, IT etc. will also be eligible.
- It is an initiative by **National Cooperative Development Corporation (NCDC),** a statutory body under the Ministry of Agriculture & Farmers Welfare.
  - **Functions of NCDC**: Planning, promoting and financing programmes for production, processing, marketing, storage, export and import of agricultural produce etc.

10.10. WORLD COMPETITIVENESS INDEX

- It was released by Institute for Management Development (independent academic institution).
- India ranked 43rd out of 63 nations (same as last year).
  - It highlighted traditional weaknesses like **poor infrastructure**, **low investment in education and health system.**
  - India has recorded improvements in areas like long-term employment growth, high-tech exports, foreign currency reserves, political stability etc.
- **Singapore has retained its top position** on the 63-nation list.
- **Note:** This index is **different from Global Competitive Index** which is released by World Economic Forum.

10.11. STATE OF WORLD POPULATION REPORT 2020

- **United Nations' Population Fund (UNFPA)**, United Nation's sexual and reproductive health agency, has released a report titled **State of World Population 2020,** titled '**Against my will: defying the practices that harm women and girls and undermine equality**'
  - Report focuses on **gender bias and violence against girls and women**.
- **Key highlights**
  - **Harmful practices**: Report identifies harmful practices against women, out of which 3 are most widespread and persistent: **female genital mutilation (FGM), child marriage and son preference.**
    - ✓ Globally, **one in five girls is married by age 18**.
    - ✓ **In India,** child marriage is directly linked to **poverty, poor education and geographic location**, rural versus urban and gender-based sex selection as emerged as a **problem among affluent families.**
  - **Missing females:** "Missing females" are women missing from the population at given dates due to the cumulative effect of post-natal and pre-natal sex selection in the past.
    - ✓ Preference for sons and gender-biased sex selection have led to over **142 million girls missing globally**.
    - ✓ **In India, 46 million girls are missing** i.e. they were not born due to sex-selection biases -- each year between 2013 and 2017.
    - ✓ 1.2 million girls lost annually to female foeticide.
  - **Impact of COVID:** Pandemic threatens to reverse progress made in ending these practices due to economic hardships, loss of access to health services etc.
- **Suggestions:**
  - **Tackle the root causes**, especially gender-biased norms.
  - **Estimating funding needs and tracking financial flows** for sexual and reproductive health services

10.12. NITI AAYOG LAUNCHES BEHAVIOUR CHANGE CAMPAIGN 'NAVIGATING THE NEW NORMAL'

- It was launched in partnership with Bill and Melinda Gates Foundation (BMGF), Centre for Social and Behavioural Change (CSBC), Ashoka University, and the Ministries of Health and Women and Child Welfare.
- It focuses on **COVID-safe behaviours, especially wearing masks, during the 'Unlock' phase of the ongoing pandemic**.
- It is developed under the guidance of **Empowered Group 6**, constituted by the Government of India and chaired by CEO, NITI Aayog.
  - Empowered Group 6 was constituted to address the issues pertaining to identification of problems, effective solutions and formulation of plans for COVID-19-related

Response Activities with Private Sector, NGOs, and International Organisations.

- The campaign has two parts:
  - A **web portal** containing information related to COVID-safe behavioural norms during the Unlock phase. Four key behaviors in the unlock phase: mask-wearing; social distancing; hand hygiene and not spitting in public
  - A **media campaign focused on the wearing of masks.**
- It has made an effort to provide people with **prompts and reminders along with simple, easy-to-practice ideas of designing their environment**.

10.13. FOOD SAFETY COMPLIANCE SYSTEM (FOSCOS) LAUNCHED BY FSSAI

- FoSCoS is cloud based, upgraded food safety compliance online platform that will act as **one-stop point for all regulatory and compliance engagements of FSSAI** with Food Business Operators.
  - It will **replace existing Food Licensing and Registration System.**
- It will **enable pan India integrated response system to any food fraud** and ensure an advanced risk based, data driven regulatory approach.
- To eliminate errors and grant licences quicker, **licensing process for food manufactures** will be based on a **standardised food product list on FoSCoS**.

10.14. WORLD FOOD PRIZE 2020

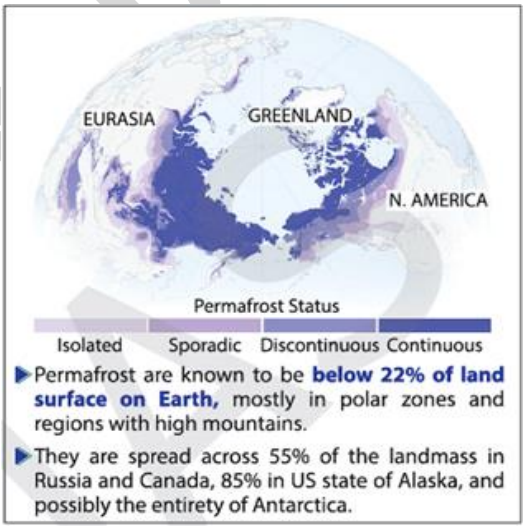
- **Indian-American soil scientist Rattan Lal won this Prize** for developing and mainstreaming a soil-centric approach to increasing food production that conserves natural resources and mitigates climate change.
- Award was created by Nobel Peace Prize laureate Norman Borlaug in 1986 **to recognise scientists and others who have improved the quality and availability of food.**
- It is awarded by **World Food Prize Foundation** and it is considered to be **Nobel Prize in Agriculture**.

10.15. OIL SPILL IN RUSSIA'S ARCTIC REGION

- Permafrost thawing is recognised as principal reason that led to **recent 20,000-tonne oil leak at an Arctic region power plant in Russia.**
  - **Plant is built entirely on permafrost**, whose weakening over the years due to climate change caused the pillars supporting a fuel tank to sink.
  - Oil leaked into the local **Ambarnaya river in the Arctic region** turning the surface crimson red. The Ambarnaya river flows to the Pyasino lake and river Pyasina, which connects it to the Kara sea, a part of the Arctic Ocean.

About Permafrost

- Permafrost is a **ground that remains completely frozen at 0°C or below for at least two years.**
- It is **composed of rock, soil and sediments held together by ice** and are believed to have formed during glacial periods dating several millennia.
- **Every 1°C rise in temperature** can degrade up to 39 lakh km^2 of Permafrost due to thawing, which can result in:
  - Ground becoming unstable and leading to landslides, floods, infrastructure damage etc.
  - Threat to survival of indigenous people & animals.
  - Release of greenhouse gases by decomposition of organic leftover under permafrost.
  - Release of ancient bacteria and viruses into atmosphere.


EURASIA
GREENLAND
N. AMERICA
Permafrost Status
Isolated
Sporadic
Discontinuous
Continuous
Permafrost are known to be below 22% of land surface on Earth, mostly in polar zones and regions with high mountains.
They are spread across 55% of the landmass in Russia and Canada, 85% in US state of Alaska, and possibly the entirety of Antarctica.

10.16. ENVIRONMENTAL PERFORMANCE INDEX (EPI)

- India **secured 168 rank (compared to 177 in 2018) out of 180 countries** in the 12th edition of the biennial Environment Performance Index (released by **Yale University**).
  - India scored **below the regional average score on all five key parameters** on environmental health.
  - All South Asian countries, except Afghanistan, were ahead of India in the ranking.
  - According to the index **India needs to re-double national sustainability efforts** on all fronts such as air and water quality, biodiversity and climate change.

- EPI ranks **180 countries** on **environmental health and ecosystem vitality** using 32 performance indicators across 11 categories.
  - **Environmental health includes**: air quality, sanitation & drinking water, heavy metals and waste management.
  - **Ecosystem vitality includes:** Biodiversity & habitat, Ecosystem services, Fisheries, climate change, pollution emissions, agriculture and water resources.
- Overall EPI rankings indicate **which countries are best addressing the environmental challenges** that every nation faces.

10.17. NAGAR VAN SCHEME

- **Ministry of Environment, Forest and Climate Change announced the 'Nagar Van scheme'** on the occasion of World Environment Day (5th June)**.**

About Nagar Van Scheme

- It aims at developing **200 Nagar Van (Urban Forests) across the country in next five years** in cities having Municipal Corporation or Municipalities by involving local communities, educational institutions, local bodies, NGOs etc.
- **Under this scheme,**
  - A **minimum of 20 hectares of forests** will be created in the city.
  - These forests will come up **either on existing forest land or on any other vacant land** offered by urban local bodies.
  - **Van Udyan** once established will be maintained by the State Government.
    - ✓ Entry fees charged to the visitors will be used for maintenance of the forests.
- Cities authorities will be encouraged to have a **city forest comprising area up to 100 ha in forest area within their jurisdiction** for deriving maximum ecological and environmental benefits.
- Scheme will be, in part, paid for by the **CAMPA (Compensatory Afforestation Fund Act, 2016) funds.**
- Scheme is also **linked to the Schools Nursery Yojana** that aims to build lasting bond between students and nature.
- **Warje Urban Forest in Pune (Maharashtra)** will be considered as a role model for the Scheme.

10.18. 2020 DESERTIFICATION AND DROUGHT DAY (JUNE 17)

- **Theme:** Food. Feed. Fibre. - the links between consumption and land.
- **Desertification** is the persistent degradation of dryland ecosystems by climate change and mainly human activities.
  - Land degradation **affects some 3.2 billion people. 70% of the world's land has been transformed** by human activity.
  - **SDG 15** aims to halt and reverse land degradation.
- UN General Assembly had also declared **2010-2020 the United Nations Decade for Deserts and the fight against Desertification.**

Healthy and Energy Efficient Buildings Initiative

- It is **launched by Energy Efficiency Services Limited** in partnership with U.S. Agency for International Development's (USAID) Market Integration and Transformation Program for Energy Efficiency (MAITREE) program.
  - **MAITREE is** a part **US-India bilateral Partnership** between **Ministry of Power and USAID** aimed at accelerating the adoption of cost-effective energy efficiency within buildings etc.
- Initiative will pioneer **ways to make workplaces healthier and greener**.
- It will address challenges of **retrofitting existing buildings and air conditioning systems** so that they are both healthy and energy efficient.

10.19. SUKHNA LAKE DECLARED AS WETLAND

- Chandigarh Wetlands Authority issued a notification for the **declaration of Sukhna Lake as a wetland under Wetland (Conservation and Management) Rule 2017** (Wetland Rules).
  - Sukhna Lake is a **man-made lake in Chandigarh** built-in 1958. It is situated at foothills of Shivalik Hills and was designed to collect runoff water from the Hills.
  - Earlier, the lake **was also declared a living entity/legal person**.
- Activities like commercial mining, setting up of industries, establishment of large scale commercial livestock and poultry farms, use of plastic carry bags etc won't be allowed in Sukhna Lake.
- List of wetlands in India is developed based on **wetlands definition of the Ramsar Convention (ratified by India)**.
  - It **defines wetlands** as 'areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which, at low tides, does not exceed six meters.
- **Wetland Rules, 2017 were notified under provisions of Environment (Protection) Act, 1986** to protect wetlands across the country.

- Wetlands can be **notified by Centre, State and UT Administration.**
- It **gives states/UTs powers** to keep a watch on prohibited activities.

10.20. SATYABHAMA (SCIENCE AND TECHNOLOGY YOJANA FOR AATMANIRBHAR BHARAT IN MINING ADVANCEMENT) PORTAL

- It is a **portal for Research & Development in Mining Advancement.** Portal is integrated with NGO Darpan Portal of NITI Aayog.
  - **NGO-Darpan** is a platform that provides space for interface between Voluntary Organizations (VOs)/NGOs and key Government Ministries / Departments / Government Bodies.
- It aims **to promote research and development in the mining and minerals sector**.
- It allows **online submission of project proposals,** monitoring of projects and utilization of funds / grants.
- It is designed, developed and implemented by **National Informatics Centre (NIC).**

10.21. YUKTI (YOUNG INDIA COMBATING COVID WITH KNOWLEDGE, TECHNOLOGY AND INNOVATION) 2.0 WEB PORTAL

- It has been **launched by Minister of Human Resource Development**
- It will help to systematically assimilate technologies having commercial potential and information **related to incubated startups in our higher education institutions.**
- Portal endeavours to ensure that **students, teachers and researchers in higher educational institutions are getting appropriate support** to meet the requirements needed to advance their technologies and innovations.
- YUKTI 2.0 is logical extension of earlier version of YUKTI, **to identify ideas relevant in COVID pandemic**.

10.22. PHARMACOPOEIA COMMISSION FOR INDIAN MEDICINE & HOMOEOPATHY (PCIM&H)

- Cabinet has approved **re-establishment of PCIM&H as Subordinate Office** under **Ministry of AYUSH** (MoA) by **merging into it Pharmacopoeia Laboratory for Indian Medicine** and **Homoeopathic Pharmacopoeia Laboratory.**
  - PCIM&H is an autonomous body under aegis of MoA established since 2010.
- Merger is aimed at **optimizing use of infrastructural facilities, technical manpower and financial resources** of three organizations for **enhancing standardization outcomes of Ayurveda, Siddha, Unani and Homoeopathy drugs** towards their effective regulation and quality control.

10.23. AAROGYAPATH

- It is **CSIR National Healthcare Supply Chain Portal** that aims to provide real-time availability of critical healthcare supplies. It would serve manufacturers, suppliers and customers.
- AarogyaPath is expected to become the **national healthcare information platform**, thereby filling a critical gap in last-mile delivery of patient care within India through improved availability and affordability of healthcare supplies.

10.24. GLUCOSE-6-PHOSPHATE DEHYDROGENASE (G6PD) DEFICIENCY

- Recently, Surat Municipal Corporation (SMC) has raised a specific COVID-19 alert for Vataliya Prajapati community whose 25% population suffers from a genetic blood disorder called G6PD deficiency.
- COVID-19 is a huge challenge for the community as due to G6PD deficiency **some drugs such as hydroxychloroquine can result in rupturing of blood vessel, brain damage in infants and kidney failure in adults.**
  - The Indian Council of Medical Research (ICMR) has recommended a wider use of hydroxychloroquine (HCQ) in battle against COVID-19.

About G6PD deficiency

- G6PD deficiency is a **genetic abnormality** that results in an **inadequate amount of glucose-6-phosphate dehydrogenase (G6PD) in the blood.**
- This is a very important enzyme (or protein) that regulates various biochemical reactions in the body.
- G6PD is also responsible for **keeping red blood cells healthy** so they can function properly and have a normal life span. Without enough of it, red blood cells break down prematurely.
  - This early destruction of red blood cells is known as Hemolysis, and it can eventually lead to **Hemolytic anemia.**
- The defective gene that causes this deficiency is on the X chromosome, which is one of the two sex chromosomes. Men have only one X chromosome, while women have two X chromosomes. In males, one altered copy of the gene is enough to cause G6PD deficiency.

- In females, however, a mutation would have to be present in both copies of the gene. Since it's less likely for females to have two altered copies of this gene, **males are affected by G6PD deficiency much more frequently than females.**

10.25. ASSISTANCE TO DISABLED PERSONS FOR PURCHASING/FITTING OF AIDS/APPLIANCES (ADIP) SCHEME

- Objective of the scheme is **to assist the needy disabled persons** in **procuring durable, sophisticated** and scientifically manufactured, modern, **standard aids and appliances** that can promote their physical, social and psychological rehabilitation and at the same time enhance their economic potential.
- ADIP scheme is **initiative of Ministry of Social Justice & Empowerment** and it is implemented through agencies such as the NGOs, National Institutes under this Ministry and ALIMCO (a PSU).

10.26. GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE (GPAI)

- Recently, India joined GPAI as a founding member
- GPAI is **multi-stakeholder international partnership** to promote responsible and human centric development and use of AI, grounded in human rights, inclusion, diversity, innovation, and economic growth.
    - **Other members include** USA, UK, EU, Australia, Canada, France, Germany, Italy, Japan, Mexico, New Zealand, Republic of Korea, Singapore.
    - This is a first initiative of its type for **evolving better understanding of the challenges and opportunities around AI** using the experience and diversity of participating countries.
    - GPAI will be supported by a **Secretariat, to be hosted by Organization for Economic Cooperation and Development (OECD) in Paris**, and by two Centers of Expertise- each in Montreal and Paris.
    - By joining GPAI, **India will be able to participate in global development of Artificial Intelligence**, leveraging upon its experience around use of digital technologies for inclusive growth.

10.27. DATA LAKE AND PROJECT MANAGEMENT SOFTWARE

- It is a **cloud based and Artificial Intelligence** powered Big Data Analytics platform launched by National Highway Authority of India (NHAI).
    - With launch of this, NHAI becomes **first construction sector organisation to go 'Fully Digital'**
- All project documentation, contractual decisions and approvals are now being done through portal only.
- It will bring benefits like No delays, Quick decision making, No question of missing records, Work from anywhere/anytime, enhance transparency etc.

10.28. GOLD NANOPARTICLES (GNPS)

- National Centre for Polar and Ocean Research and the Goa University has successfully **synthesized GNPs using psychrotolerant Antarctic bacteria.**
- Nanoparticles (NP) are defined as **particles that range in size from 1 to 100 nm at least in one dimension**.
- **NPs have a high surface-to-volume ratio** that enables them to possess unexpected optical, physical and chemical properties.
- GNP's **biocompatibility, high surface area, stability, and non-toxicity** make them suitable for various applications in therapeutic use including detection and diagnosis of diseases, bio-labelling, and targeted drug delivery.
- GNPs are also found to be **useful in the electronics industry.**

10.29. PORTABLE UV LIGHT DEVICE TO KILL CORONA VIRUS

- A recent research has reported the **feasibility** of making an **Ultraviolet (UV) light emitting, hand held and portable device** that can kill **Corona virus.**
- UV radiation in the **200-300 nanometer range** is known to **destroy the virus**, making it **incapable of reproducing and infecting.**
    - Ultraviolet (UV) radiation covers the **wavelength range of 100–400 nm**, which is a **higher frequency and lower wavelength than visible light**.
- To disinfect areas from the coronavirus with UV radiation, one needs sources that emit **sufficiently high doses of UV light**.
- **However, currently such devices** require expensive mercury-containing gas discharge lamp, which requires high power, has a relatively short lifetime, and is bulky.
- The recently discovered device use a material called **strontium niobate,** that can help develop **UV light-emitting diodes (LEDs**), which would be **portable and energy-efficient**.
- However, it **can be used to disinfect public spaces only**, not human skin as UV exposure can cause skin cancers, cataracts and immune system damage.

10.30. EXTREME HELIUM STAR (EHE)

- Recently, presence of singly ionised fluorine was detected in the atmospheres EHe that makes a strong case that the **main formation of EHe involves a merger of a carbon-oxygen and a Helium (He) white dwarf.**
- EHe is **low-mass supergiant star** that is almost devoid of hydrogen, and has abundance of surface helium.
  - This is in **contrast to majority of Stars** (including Sun) which contain some 70% hydrogen (by mass) throughout their lives.
- EHe stars are **much larger and hotter than Sun** despite being less massive.

10.31. KHELO INDIA STATE CENTRES OF EXCELLENCE

- The Sports Ministry will establish **Khelo India State Centres of Excellence (KISCE)** under the ministry's flagship, **Khelo India -National Programme for Development of Sports Scheme.**
- **Aim:** To scale-up State/UTs existing training centre to world standard level. One of the existing training centres in each state and union territory will be designated as KISCE under the State Level Khelo India Centre (SLKIC) vertical of Khelo India Scheme.
- In the first phase, the **Ministry has identified state-owned sports facilities in eight states of India,** including, Karnataka, Odisha, Kerala, Telengana and the north east states of Arunachal Pradesh, Manipur, Mizoram and Nagaland **which will be upgraded into KISCE.**
- In order to upgrade the existing centre to the KISCE, the government will extend a '**Viability Gap Funding'** for the following components:
  - sports science and technology support for sports disciplines practiced at the respective centre
  - bridging the gaps in requirement of sports equipment, expert coaches and high performance managers.
- **Implementing agency**: **Sports department** of the respective State/UT.
- **Financial assistance:** All eligible centres will receive **annual grant** for the identified KISCE.
- The project **is part of India's pursuit for excellence in Olympics**.

About the Khelo India scheme

- It has been introduced to revive the sports culture in India at the grass-root level by building a strong framework for all sports played in our country and establish India as a great sporting nation.
- **Objective**
  - Conduct structured annual sports competition and encourage Mass participation of youth.
  - Identify talent through these competitions.
  - Guidance and nurturing of the talent through the existing and new infrastructure
  - Creation of Sports infrastructure at various levels.
- It is the **merger of three schemes** Rajiv Gandhi Khel Abhiyan (RGKA), Urban Sports Infrastructure Scheme (USIS), National Sports Talent Search Scheme (NSTSS).

10.32. RAMON MAGSAYSAY AWARDS

- Ramon Magsaysay awards have been cancelled this year due to the coronavirus pandemic,
- It is regarded as Asia's version of the Nobel Prize. It was started in 1957.
- The awards are named after the **third president of the Republic of the Philippines.**
- The awards were traditionally given every year to individuals or organisations in Asia in **five categories:** government service; public service; community leadership; journalism, literature, and creative communication arts; and peace and international understanding.
- However, post 2009, the Ramon Magsaysay Award Foundation annually selects the awardees for the **field of Emergent Leadership.**

10.33. GAIRSAIN

- Uttrakhand governor gave assent to make **Gairsain as Uttarakhand's summer capital**.
- **Gairsain, a tehsil in Chamoli district**, lay between both the Kumaon and Garhwal regions and hence is convenient for people of both Garhwal and Kumaon divisions to access.
- It is located nearly 270 km from Dehradun, the existing capital.

10.34. BIMAL JULKA COMMITTEE

- It is an **Expert Committees on Rationalisation, Closure or Merger of Film Media Units** and **Review of Autonomous Bodies** under Ministry of Information and Broadcasting.
- It suggested **an umbrella configuration** with 4 broad verticals: **Production, Festival, Heritage and Knowledge.**
- It also recommended creation of **Film Promotion Fund** for independent filmmakers for making commercial film.

11. SCHEMES IN NEWS

11.1. PM STREET VENDOR'S ATMANIRBHAR NIDHI (PM SVANIDHI)

Why in news?

Ministry of Housing and Urban Affairs has launched PM SVANidhi (PM स्वनिधि)- PM Street Vendor's Atmanirbhar Nidhi.

Objectives	Beneficiaries	Features

• **It is** Special Micro-Credit Facility Scheme **for providing** affordable loans to street vendors**.**
• **This scheme will** enable street vendors to resume work **and earn livelihoods in the wake of the COVID-19 crisis.**
	• Over 50 lakh people, including vendors, hawkers, thelewalas etc. who supply vegetables, fruits, ready-to-eat street foods etc.
	• Also **includes service providers** like barber shops, cobblers, pan shops, laundry services etc.
	• Scheme is available for beneficiaries belonging to only those States/UTs which have notified Rules and Scheme under **Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.**
		• The vendors can avail a working **capital loan of up to Rs. 10,000**, repayable in monthly instalments in **tenure of one year**.
		• On **timely/ early repayment** of the loan, **credit limit will be raised and interest subsidy @ 7% per annum** will be credited through Direct Benefit Transfer on quarterly basis.
		• The scheme **incentivises digital transactions** by the street vendors through monthly cash back upto Rs. 100 per month.
		• In 1st phase 108 cities have been selected, and disbursement of loan is planned to commence in July, 2020.
		• **Technology**
		  ○ **SIDBI has developed Integrated PM SVANidhi portal** to administer the scheme with end-to-end solution.
		  ○ Portal/ mobile app will integrate **UdyamiMitra portal of SIDBI** for credit management and **PAiSA portal of MoHUA** to administer interest subsidy automatically.
		• **Credit lending and implementation**
		  ○ Small Industries Development Bank of India **(SIDBI) is an implementation agency**.
		  ○ SIDBI will manage the credit guarantee to the lending institutions through **Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE).**
		  ○ **Eligible lenders:** Scheduled Commercial Banks, Regional Rural Banks, Small Finance Banks, Cooperative Banks, Non-Banking Finance Companies, Micro Finance Institutions & SHG Banks established in some States/UT etc.

11.2. PM FORMALIZATION OF MICRO FOOD PROCESSING ENTERPRISES SCHEME

Why in news?

Ministry of Food Processing Industries (MoFPI) launched Centrally Sponsored '**PM Formalisation of Micro food processing Enterprises (PM FME) scheme'** as part of Atmanirbhar Bharat Abhiyan.

Objective	Features

• **To** provide financial, technical and business support **for upgradation of** existing micro food processing enterprises.
• **Aim is to generate** total investment of Rs 35,000 crore, **9 lakh skilled and semi-skilled employment and benefit 8 lakh units through access to information, training, better exposure and formalization.**
	• Scheme adopts **One District One Product (ODOP) approach** to reap benefit of scale.
	  ○ **States would identify food product for a district** that could be a perishable produce or cereal based product.
	  ○ It would also focus on **waste to wealth products, minor forest products** and Aspirational Districts.
	  ○ **Support will be provided** for common infrastructure and branding marketing for ODOP products.
	• **Micro enterprises will get 35% subsidy on project cost**, with a ceiling of Rs 10 lakh, for capital investment along the value chain.
	• **Seed capital @ Rs. 40,000/- per SHG member** would be provided for working capital and purchase of small tools.
	• **National Institute of Food Technology, Entrepreneurship and Management** (Sonipat, Haryana) and **Indian Institute of Food Processing Technology** (Thanjavur, Tamil Nadu) (both under MoFPI) would be provided support for training of units, product development etc. with special focus on **capacity building and research.**
	• **Funding pattern**: Outlay of Rs 10,000 crore with sharing mechanism as 90:10 for North Eastern and Himalayan States, 60:40 for other states, 60:40 ratio with UTs with legislature and 100% by Centre for other UTs.
	• Scheme is to be **implemented over a period of five years** from 2020-21 to 2024-25.

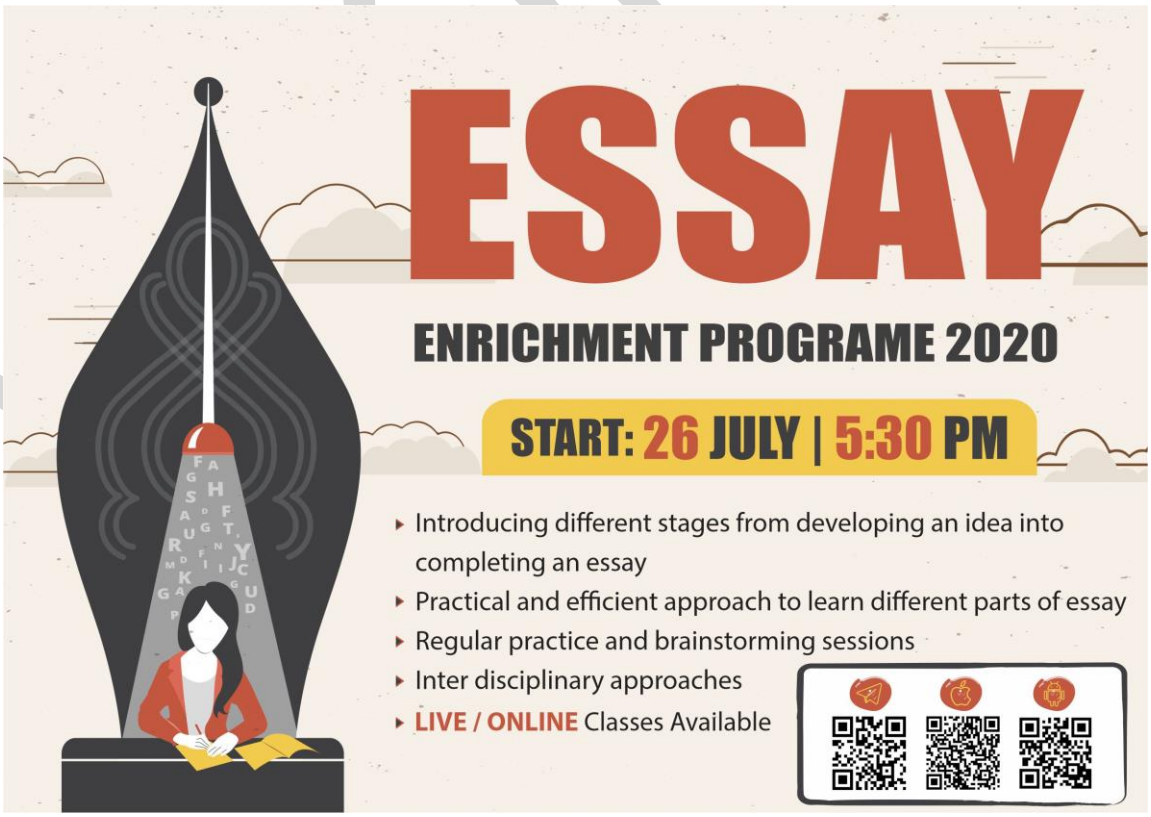
11.3. GARIB KALYAN ROJGAR ABHIYAN (GKRA)

Why in news?

Recently, Prime Minister launched '**Garib Kalyan Rojgar Abhiyaan'** from Telihar in Bihar.

Objectives	Salient Features

To empower and provide livelihood opportunities in areas/ villages **witnessing large number of returnee migrant workers affected by the devastating COVID-19 and similarly affected rural citizens.**	• It is massive **employment -cum- rural public works Campaign.**
	• **Public works to be undertaken during this campaign** will have a resource envelope of Rs 50,000 crores.
	  ○ The campaign **involves 125 days of work.**
	• **Coverage**
	  ○ It covers 116 districts in **6 states - Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha.**
	  ○ The chosen districts include **27 Aspirational Districts.**
	  ○ These districts are estimated to cover about 2/3 of such migrant workers.
	• **Emphasis on rural infrastructure**
	  ○ It will have **25 different types of public works** to create infrastructure and boost livelihood opportunities in rural areas designated in the campaign.
	  ○ The public works under the Abhiyaan are
	  ✓ **rural housing for the poor**
	  ✓ **provision of drinking water through Jal Jeevan mission**
	  ✓ **Panchayat Bhavans**
	  ✓ **community toilets**
	  ✓ **rural mandis**
	  ✓ **rural roads**
	  ✓ **other infrastructure like Cattle Sheds, Anganwadi Bhavans** etc.
	  ○ High speed and cheap internet is also to be provided in every rural household. Hence the laying of fibre cable and provision of internet are also part of the campaign.
	• **Multi-Ministerial Effort:** Abhiyaan will be a convergent effort between different Ministries/Departments with **Ministry of Rural Development as the nodal Ministry. Other ministries include** Panchayati Raj, Road Transport & Highways, Mines etc.
	• This campaign is one of the components of **Rs 1.70 Lakh Crore relief package under Pradhan Mantri Garib Kalyan Yojana for the poor to help them fight the battle against Corona Virus.**


ESSAY
ENRICHMENT PROGRAME 2020
START: 26 JULY | 5:30 PM
Introducing different stages from developing an idea into completing an essay
Practical and efficient approach to learn different parts of essay
Regular practice and brainstorming sessions
Inter disciplinary approaches
LIVE / ONLINE Classes Available

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